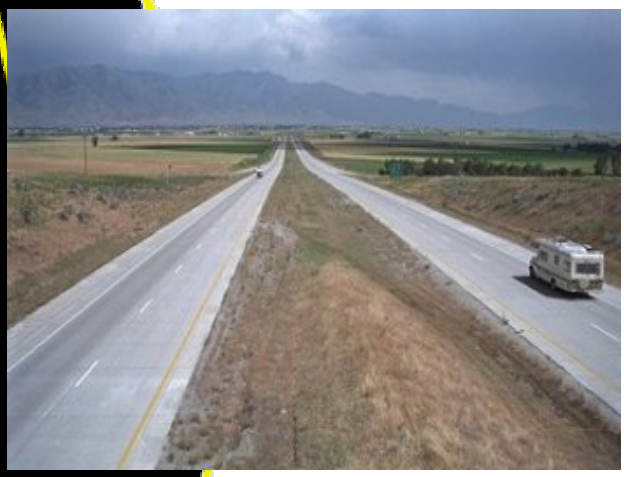
Tremonton

Transportation Master Plan



DRAFT REPORT
2004

Prepared By
UDOT Planning Section
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Tremonton

Transportation Master Plan

Mayor ..……	Max Weese
City Council ...…….……	Steve Chadaz Wayne Payne Jeff Reese Stanley Stokes Bryon Wood
City Manager ……..	Richard Woodworth
Planning & Economic Coordinator…..…	
Community Development Supervisor ….	
Public Works Director …….	Paul Fulgham
Zoning Administrator ……..	
City Engineer ……..……..	Kent Jones
Street Supervisor ……..	Ed Quinn
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1. Introduction

1.1. Background

Tremonton is located in the Bear River Valley, just west of the Bear River, along Interstate 15, and about seven miles south of the confluence of the Malad and Bear rivers. Its elevation is 4,322 feet above sea level and about 120 feet above the mean level of the Great Salt Lake, which lies some fifteen miles south and west of the city. Tremonton is the second largest city in Box Elder County; it had a population in the 1930s of some 1,400 and an estimated population in 1992 of 4,264.

The area was inhabited by the Fremont and later the Shoshoni Indians before the coming of the first white settlers in the late nineteenth century. Though the townsite was first settled in 1888, the town itself owes its existence to the "second colonization" of Utah around the turn of the twentieth century. John Petty took up a homestead of 160 acres in the area in the year 1888. His farm covered the present south half of town.

Toward the opening of the new century, land agents, including V.S. Peet, the immigration agent for the Union Pacific Railroad Company, went east to induce more people to settle in the Bear River Valley. As a result, a number of families from Nebraska came to the area and bought farms during the years following 1898. Fred Nihart came from Cairo, Nebraska, in the spring of 1899, settling on the northeast quarter of the present townsite. According to his own statement, he came because of a desire to farm irrigated land.

After the Bear River had been tapped and the local canal system built, water began to flow over the thirsty soil. In 1892 possibilities for Bear River Valley began to look promising for many new settlers. Fred Nihart reported that others came from Nebraska and also from Tremont, Illinois, in 1899.

A German colony came from Tremont, Illinois, in the spring of 1900 and settled on or near the Salt Creek. They soon built nice homes and improved their farms. The townsite of Tremonton was laid out early in the spring of 1903 by John Shuman, Fred Nihart, and John Petty on part of their farms. They chose the site because of its location on the Malad branch of the Oregon Short Line railroad and because it was centrally located on the crossroads in the Bear River Valley.

C. C. Wilson of Bear River City purchased the first lot and built a building which he used as office and sales room for his hardware business. His lumber was piled at the side of the office in the sagebrush. He opened his door for business on 14 April 1903.

Petty, Shuman, and Nihart began erecting buildings to attract business to the new townsite. Shuman opened a meat market and distributed mail from the market. Felix Zesigar opened a barbershop, and a Mr. Stohl moved his saloon from Corinne. Nihart opened an office and started a weekly newspaper, the *Tremont Times*, which he had printed in Logan but which was distributed from the new townsite which, at the request of the German colony, had been named "Tremont." ...Following the first business boom and for a year thereafter, businessmen were attracted to the town from all parts of the county. Their businesses included Meldrum's blacksmith shop, Sherman's general merchandise store, Cook's drug store, Mrs. Cook's millinery store, Mrs. John Shuman's boarding house, Proctor Hotel, Goss Livery Stable, Stohl Furniture Store, Thomas Waldron's general merchandise store, Fishburn and Son's general merchandise store, Consolidated Wagon and Machine Company, Mr. Zimmerman's saloon, Wyatt Brothers' meat market, and the Kent Hotel. Very few homes

were built during the first year; most of the families lived in the rear rooms of their places of business.

The town's name of Tremont was of short duration. Within three or four years, the name was so frequently confused with Fremont, Utah, that postal authorities requested a name change for the newer town. By simply adding two letters to Tremont, the town became Tremonton and the identity problem was solved.

A town organization was effected on 6 January 1906, with J.A. Fishburn as president, and J.C. Gates, D.C. Roush, S.B. Watland, and E.M. Wyatt members of the board, with George Shuman, clerk. They at once began to make improvements. Land for a city park was purchased from John Shuman for $50.00. In 1909 the old board sidewalks were replaced by cement walks; in 1910 a $6,000 bond was issued and a water system installed using water from the local canals; in 1911 Utah Power and Light Company installed an electric light system.

On 29 March 1912 the Tremonton Commercial Club was organized with Aquilla N. Fishburn as president, Charles McClure as vice-president, Harry L. Gephart secretary, and S.N. Cole treasurer. The club voted to organize a hotel commission. David Holmgren was chairman of the commission, which at once began the erection of the Midland Hotel. The contractors soon learned that the underground water was too near the surface to make the building of foundations and basements either safe or possible. Therefore, Matthew Baer organized a drainage company in July 1913, and by November of that year a sewer and drainage system had been extended to the greater portion of the town.

From the summer of 1912 to the close of 1914 Tremonton experienced a building boom. Coles Bank, the Shield Hotel block, Waldron and Harris Mercantile Building, and the Midland Hotel were all built. On 6 May 1918 Tremonton was incorporated as a city of the third class with Charles McClure as mayor; J.A. King, David Holmgren, W.H. Stone, and H.T. Woodward, city councilmen; Louis Brenkman, clerk; and W.E. Getz, treasurer. That same year, the city voted a $50,000 bond and installed a new water system using water from the Johnson Spring located just east of Point Lookout. By 1925 the population of Tremonton numbered 1,000.

The founding of Tremonton differed in many respects from the settlement of a vast majority of its sister communities in the valley. Most of the families pushing north and west to establish homes in the region were Mormon; but the first people of Tremonton and vicinity were non-Mormon. They were people who brought with them a variety of religious beliefs from their former homes. They also were an industrious, progressive, and sincere people who, regardless of differences in belief, were willing to cooperate with their neighbors. These qualities were evident when they constructed the first Union schoolhouse to educate *all* their children. They further united (hence the name "Union") by sharing that building on Sunday, when several denominations used it during the course of the day for their services.

Tremonton is a modern city. From 1906, when it was first incorporated as a town, to 1918, when it was designated a third-class city, to the present, growth has been steady. Educational, recreational, civic, health, medical, and religious services and facilities have been updated and expanded with the steady growth of the city. Economically, the city is a central shopping place for the Bear River Valley. In 1992, 267 businesses were operating with official city licenses.

Employment opportunities also have expanded with the Thiokol plant located twenty-six miles to the west. Nucor Steel is located fourteen miles to the north. La-Z-Boy Chair Company operates within the city limits. Tremonton church groups include LDS, Baptist, Methodist, and Catholic.

This information was provided from www.onlineutah.com, in an article written by Kleon Kerr.

1.2. Study Need

The City of Tremonton has seen a 31% population increase within the last decade and just over 23% population increase the decade before. From 1960 to 2000, the population has increased 164%. Population in the Tremonton area has had a consistent increase in the population. A well-established transportation plan is needed to provide direction for continual maintenance and improvements to Tremonton's transportation system.

Tremonton has an adopted a General Plan. The Tremonton General Plan briefly describes the transportation needs of this area. With the aging infrastructure of Tremonton transportation system and the need for system improvements, a more extensive transportation plan is necessary for Tremonton and the surrounding area.

Some of the major transportation issues around the State are as follows:

- Safety
- Railroad crossings
- Trails (bicycle, pedestrian, & OHV)
- Signals
- City interchange aesthetics
- Connectivity of roadways
- Property access
- Truck traffic
- Alternate routes
- Speed limits

Tremonton recognizes the importance of building and maintaining safe roadways, not only for the auto traffic but also for pedestrians and bicyclists.

1.3. Study Purpose

The purpose of this study is to assist in the development of a transportation master plan for Tremonton. This plan could be adopted by Tremonton as a companion document to the city's General Plan. With the transportation master plan in place the city can qualify for grants from the State Quality Growth Commission.

The primary objective of the study is to establish a solid transportation master plan to guide future developments and roadway expenditures. The plan includes two major components:

- Short-range action plan

- Long-range transportation plan

Short-range improvements focus on specific projects to improve deficiencies in the existing transportation system. The long-range plan will identify those projects that require significant advance planning and funding to implement and are needed to accommodate future traffic demand within the study area.

1.4. Study Area

The study area includes Tremonton, and land adjacent to it that is in Box Elder County. A general location map is shown in Figure 1-1. A more detailed map of the study area and city limits is shown in Figure 1-2. The study area was developed by Tremonton and approved by the Tremonton Transportation Master Plan Technical Advisory Committee.

The roadway network within the study area includes I-15, I-84, SR-102, SR-82, & SR-13. Each of these roadways provides a vital function to Tremonton, to the rest of Box Elder County and to the State of Utah. I-15 connects all points north and South including Salt Lake City and the Utah/Idaho State Line. I-15 also connects to I-84 just to the West. I-15 is also a region commuter and commercial trucking route. SR-102 connects areas to the East from I-15 including an important route to the Cache Valley and the City of Logan. SR-13 connects the area to the South. This route is important as it provides an emergency route in times when I-15 is not available. SR-102 is the Main Street in Tremonton and serves local business and community circulation needs. These roadways along with the local road network are shown in Figure 1-2.

1.5. Study Process

The study, which began in September 2004, is proceeding as a cooperative effort between Tremonton, UDOT, and local community members. It is being conducted under the guidance of Tremonton Officials. The following individuals participated in the initial meetings to provide input used to create this document. This group listed below will be referred to as the Technical Advisory Committee or "TAC" for this document.

Max Weese	Mayor, Tremonton City
Steve Chadaz	City Council
Wayne Payne	City Council
Jeff Reese	City Council
Stanley Stokes	City Council
Byron Wood	City Council
Judy Mason	City Planning Commission
Kurt Barraclough	City Planning Commission
Sarri Oyler	City Planning Commission

Louis Douglas	City Planning Commission
Boyd Parker	City Planning Commission
Ryan Hardy	City Planning Commission
Richard Woodworth	City Manager
Steve Bench	City Planning
Bill Hull	City Planning
Gerald Smith	City Planning
Idalyn Larkin	B.E. School District Transportation
Cindy S. Tanner	Private Citizen
Keith Klein	ACHI Principal
Rhonda Gephart	Private Citizen
Paul Fulgham	Public Works Director
Dave Nance	Police Department
Calvin Bingham	B.E. School District
Jerry Fronk	Self Employed Businessman
Lyle Holmgren	Private Citizen
Dale Thomas	Bear River Principle
Harry Gephart	Private Citizen
Dan Ericson	UDOT Region One Assistant Traffic Engineer
Charles Mace	UDOT Region One Project Manager

Figure 1-1: Tremonton Study Area Location

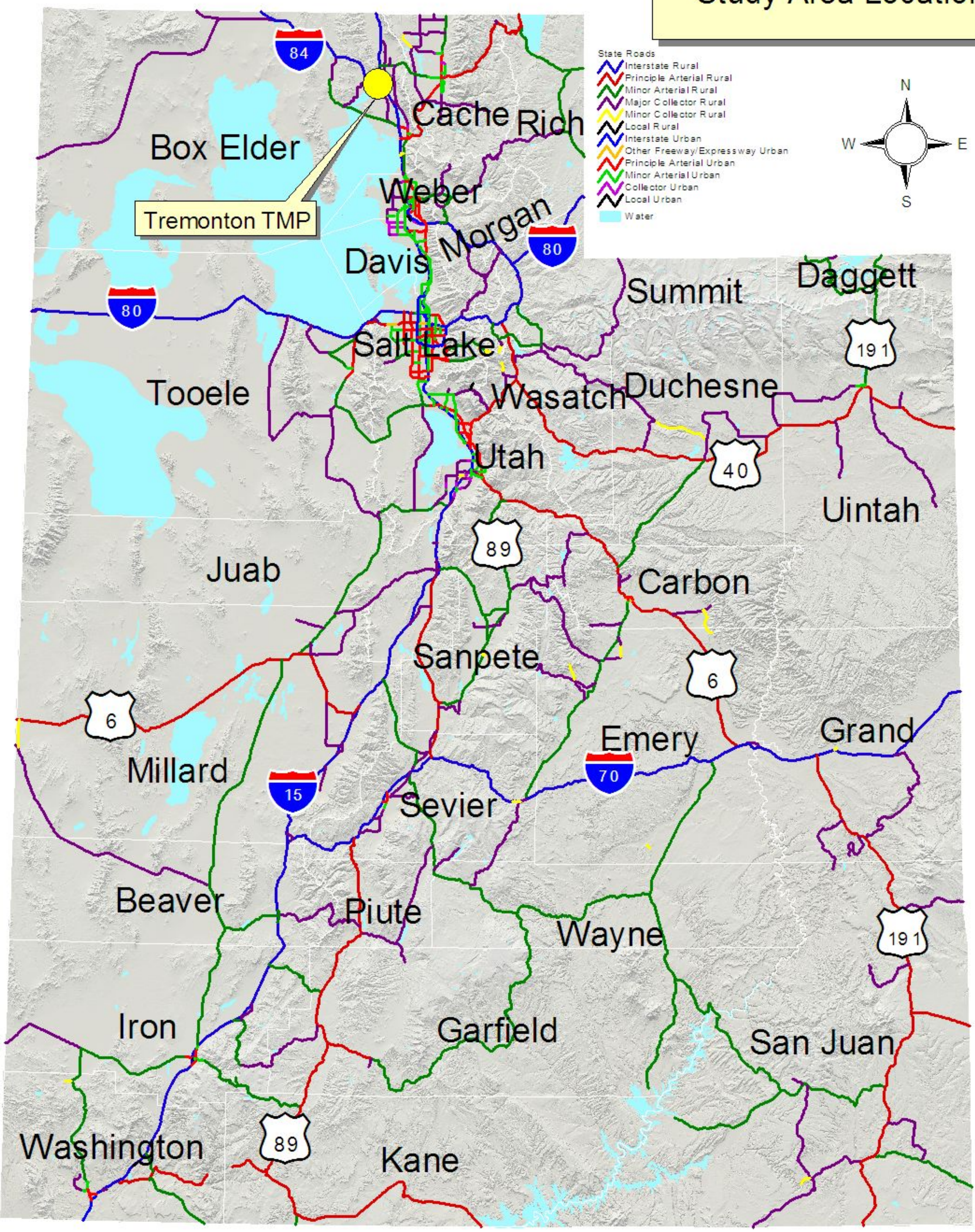
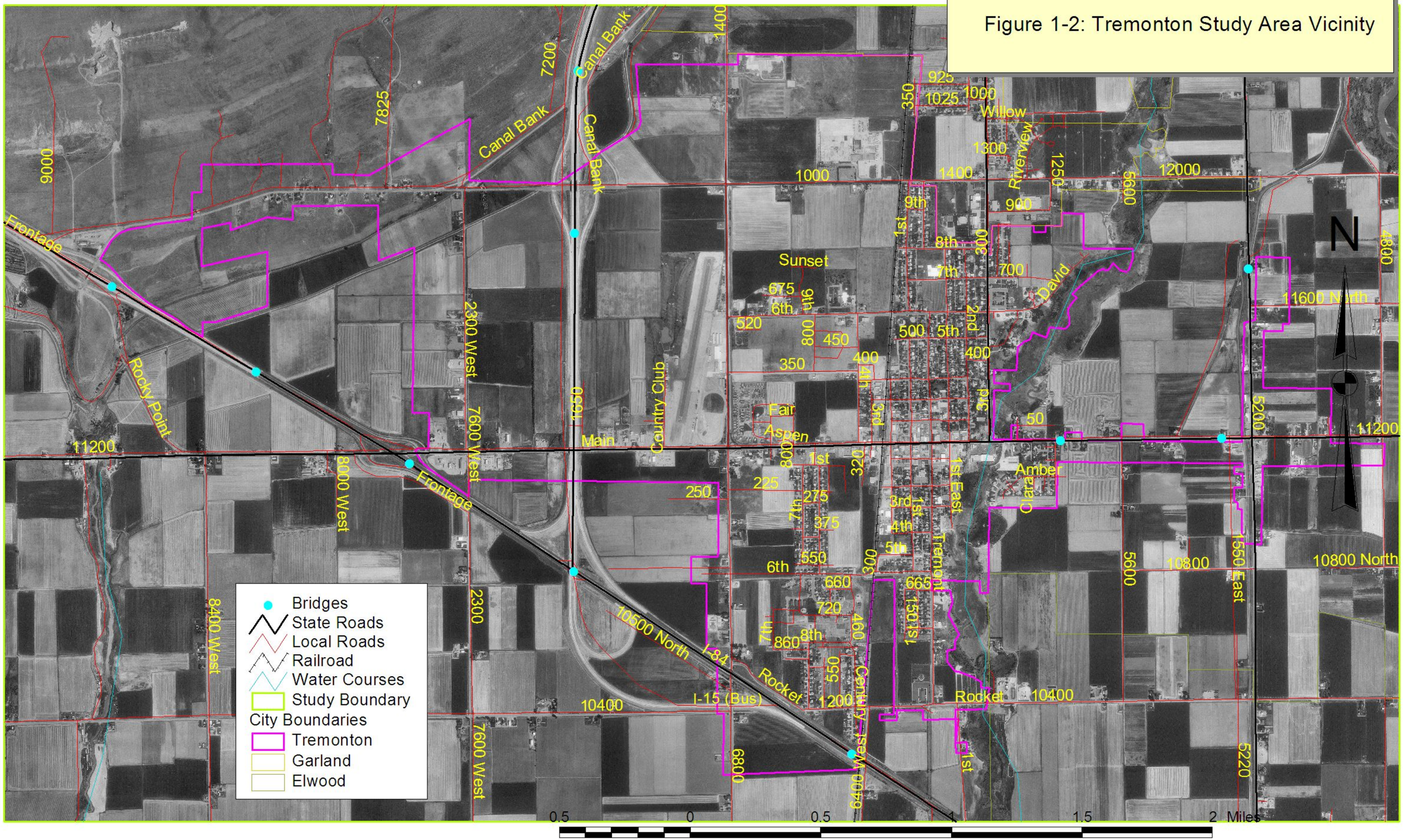


Figure 1-2: Tremonton Study Area Vicinity



The study process for the Tremonton Transportation Master Plan consist of three basic parts: (1) inventory and analyze existing conditions, (2) project future conditions, and (3) development of a transportation master plan (TMP). This process involves the participation of the TAC for guidance, review, evaluation and recommendations in developing the TMP to include development of future projects for the identified study area.

The TAC will evaluate each part of the study process. Their comments will be incorporated into the study's draft final report. The remainder of the draft final report will focus on the recommendation and implementation portion of the transportation plan program. Transportation projects that will be recommended for the short-term and long-range needs will be developed based on the TAC's recommendations and concurrence.

The study process allows for the solicitation of input from the public at two TAC workshops. This public participation element is included in the study process to ensure that any decisions made regarding this study are acceptable to the community.

The first TAC workshop will provide an inventory and analysis of existing conditions and identify needed transportation improvements. The second TAC workshop will focus on prioritizing projects, estimating costs, and discussion of the funding processes.

The TAC is expected to recommend those comments that are to be incorporated into the report and applicable to the goals of this study. The draft final report and the final report will be submitted to the City for review and comments.

Upon local review of the draft report, UDOT will prepare appropriate changes and submit the final report to the City for approval. The final report will describe the study process, findings and conclusions, and will document the analysis of the recommended transportation system projects and improvements.

2. Existing Conditions

An inventory and evaluation of existing conditions within the study area was conducted to identify existing transportation problems or issues. The results of the investigation follow.

2.1. Land Use

In order to analyze and forecast traffic volumes, it is essential to understand the land use patterns within the study area. Much of the City is zoned Residential, but there are also many issues dealing with commercial and industrial properties. By analyzing the patterns or changes in land use, we can better predict the ever-changing transportation needs.

The Tremonton City Zoning map follows on the next page.

2.2. Environmental

In Utah there are a variety of local environmental issues. Each of the cities and counties need to look at what are the environmental issues in their areas on a case-by-case basis. There are many resources that can help local entities to determine what issues need to be addressed and how any problems that may exist can be resolved.

Some of the environmental concerns around the State are wetlands, endangered species, archeological sites, and geological sites among other issues. Environmental concerns should be addressed when looking at an area for any type of improvement to the transportation system. Protecting the environment is a critical part of the transportation planning process.

2.3. Socio-Economic (Census Brief: Cities and Counties of Utah, May 2001)

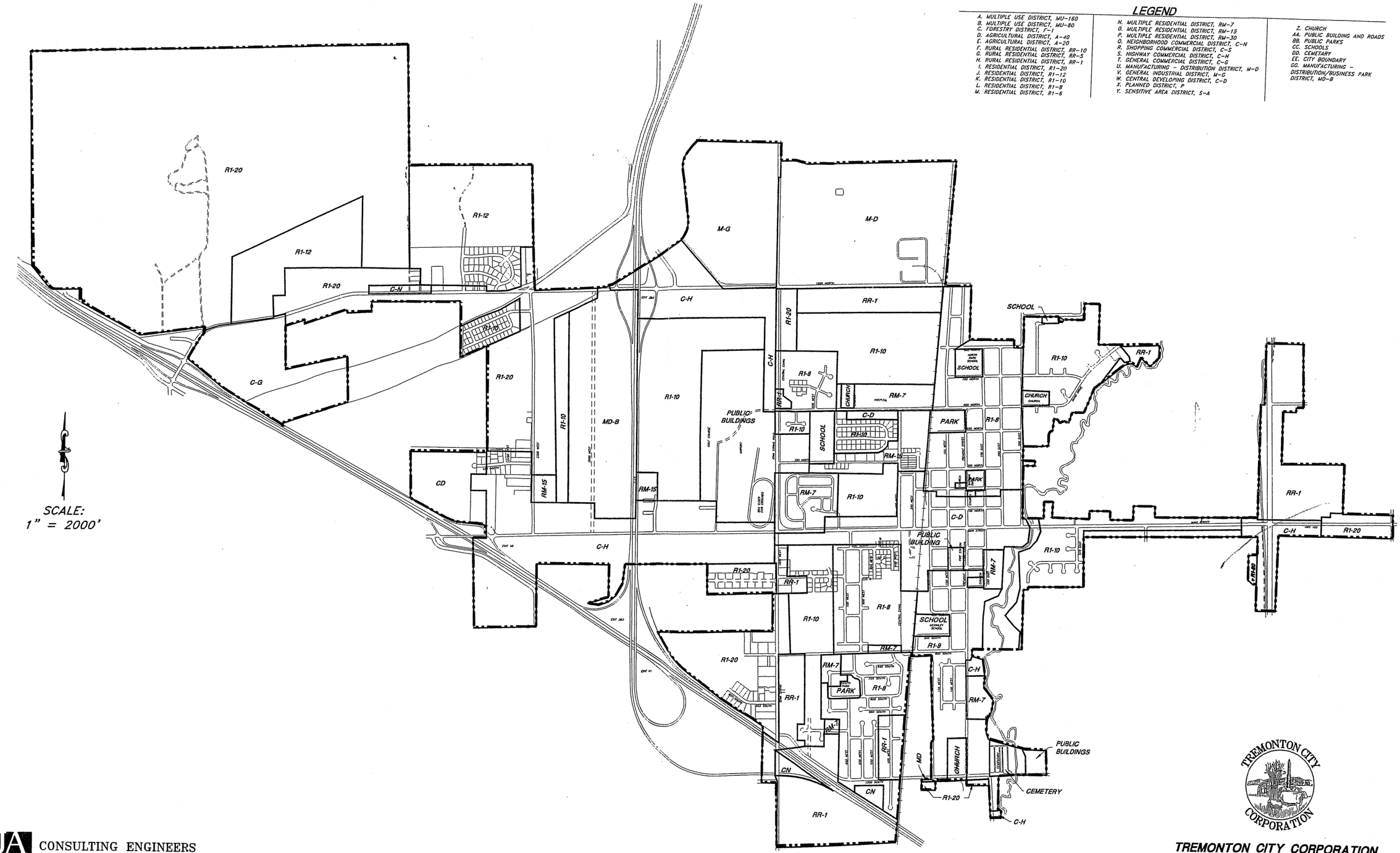
Tremonton City ranks 59th for population in the State of Utah, out of 235 incorporated cities and towns. Historical growth rates have been identified for this study, because past growth is usually a good indicator of what might occur in the future. Chart 2-1 identifies the population growth over the past 50 years for the State of Utah, Box Elder County and Tremonton City. Chart 2-2 identifies that population change in Tremonton City has ranged from 32.10% between 1960 and 1970 to gaining 23.09 % between 1980 and 1990, while growth in the State has gained between 18 and 38 percent during the past 50 years.

FIGURE 2-1

LEGEND

A. MULTIPLE USE DISTRICT, MU-160
B. MULTIPLE USE DISTRICT, MU-80
C. FORESTRY DISTRICT, F-1
D. AGRICULTURAL DISTRICT, A-40
E. AGRICULTURAL DISTRICT, A-20
F. RURAL RESIDENTIAL DISTRICT, RR-10
G. RURAL RESIDENTIAL DISTRICT, RR-5
H. RURAL RESIDENTIAL DISTRICT, RR-1
I. RESIDENTIAL DISTRICT, R1-20
J. RESIDENTIAL DISTRICT, R1-12
K. RESIDENTIAL DISTRICT, R1-10
L. RESIDENTIAL DISTRICT, R1-8
M. RESIDENTIAL DISTRICT, R1-6
N. MULTIPLE RESIDENTIAL DISTRICT, RM-7
O. MULTIPLE RESIDENTIAL DISTRICT, RM-15
P. MULTIPLE RESIDENTIAL DISTRICT, RM-30
Q. NEIGHBORHOOD COMMERCIAL DISTRICT, C-N
R. SHOPPING COMMERCIAL DISTRICT, C-S
S. HIGHWAY COMMERCIAL DISTRICT, C-H
T. GENERAL COMMERCIAL DISTRICT, C-G
U. MANUFACTURING - DISTRIBUTION DISTRICT, M-D
V. GENERAL INDUSTRIAL DISTRICT, M-G
W. CENTRAL DEVELOPING DISTRICT, C-D
X. PLANNED DISTRICT, P
Y. SENSITIVE AREA DISTRICT, S-A
Z. CHURCH
AA. PUBLIC BUILDING AND ROADS
BB. PUBLIC PARKS
CC. SCHOOLS
DD. CEMETARY
EE. CITY BOUNDARY
GG. MANUFACTURING - DISTRIBUTION/BUSINESS PARK DISTRICT, MD-B

SCALE:
1" = 2000'



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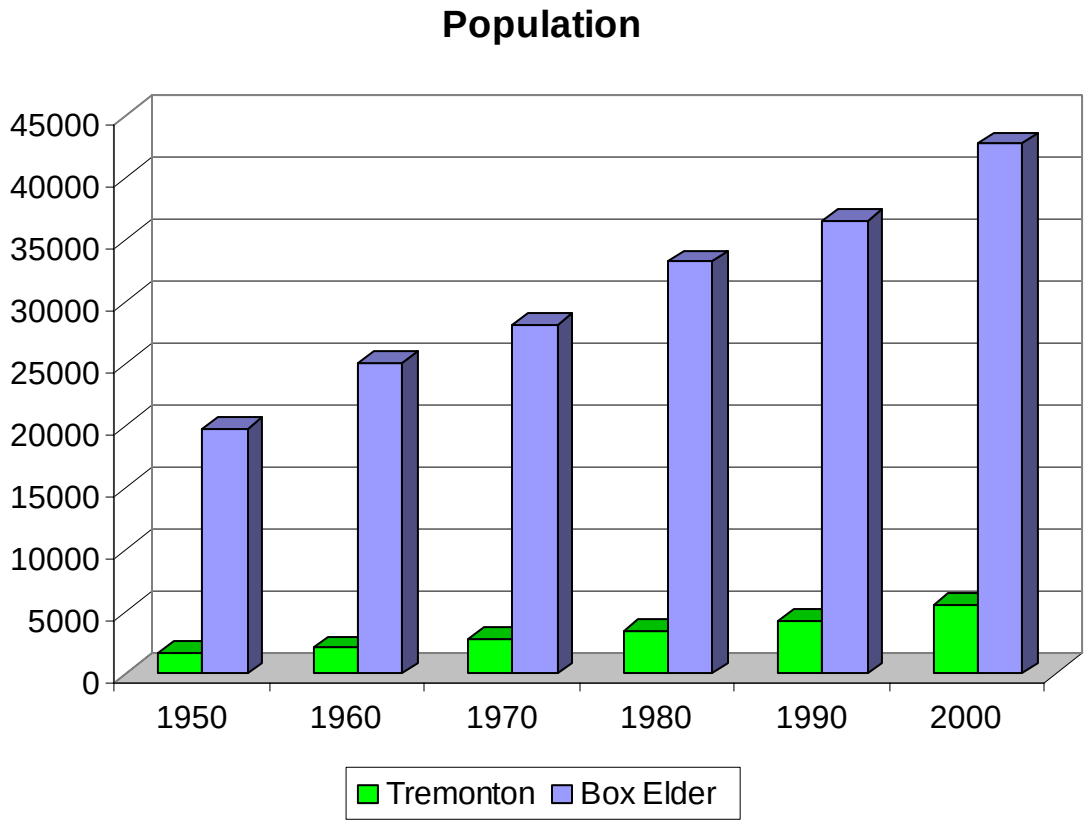
TREMONTON CITY CORPORATION

TREMONTON CITY CORPORATION
ZONING MAP
AUGUST 2003

Chart 2-1. Population Data

	Population		
Year	Utah	Box Elder County	Tremonton City
1950	688,862	19,734	1,662
1960	890,627	25,061	2,115
1970	1,059,273	28,129	2,794
1980	1,461,037	33,222	3,464
1990	1,722,850	36,485	4,264
2000	2,233,169	42,745	5,592



Source: U.S. Bureau of the Census
http://www.govenor.utah.gov/dea/OtherPublications.html

Chart 2-3 identifies yearly population growth rates for the State of Utah and Box Elder County.

Though the State population has grown every decade from 1950 until 2000, Box Elder County has also showed a slower, yet consistent, rate of growth in population over the same period.

Tremonton City has some unique demographic characteristics when compared with the State, particularly with age demographics. In the 25 to 54-age category, the State is at 38.6% the County is at 35.7% and the City is at 35.2%. For the 65+-age category, the State is at 8.5%, the County is at 10.4% and the City is at 9.1%. The State's median age is 27.1 years and the County's median age is 28.0 years, City's median age is 25.4 years. Another interesting statistic is that of Veteran status with State at 10.7%, County at 11.4%, and Tremonton City at 9.1%.

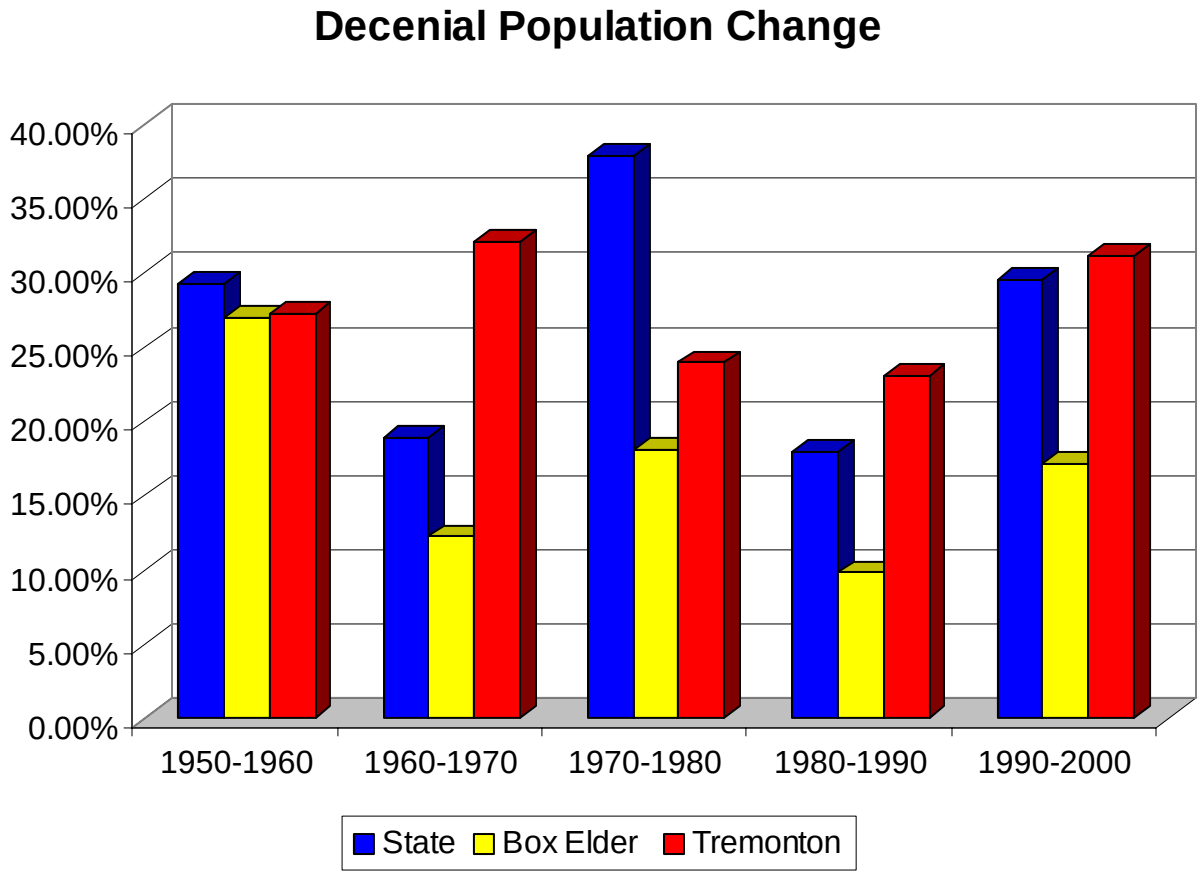
The 2000 median household income in Tremonton City is $44,784, compared to the State median household income of $45,726.

The unemployment rate in Tremonton City was 3.5 percent in 2000. Due to Tremonton City's large reliance on manufacturing jobs, the city has had larger rates of unemployment especially thououghout the 90's, slightly greater than that of the State. According to the Utah Department of Employment Security (UDES), in 2000 there were approximately 2,471 employed people in Tremonton City or 67.9 % of the population. The city has 127 unemployed people, which is 3.5% of the population. There are 18,298 employed people in Box Elder County or 62.5% percent of the population. The county has 1,013 people unemployed, which is 3.5% of the population.

The majority of employees in Box Elder County work in three primary employment sectors: Manufacturing, Trade and Government as shown in Chart 2-5. In the county, these sectors make up 58.61% of the labor force. Another interesting note was that housing built from 1990-2000 were 27.1 % of total for Tremonton City compared to 25% for the state. Also homes built before 1939 were 11.7 % of the total for Tremonton City with 10% for the state.

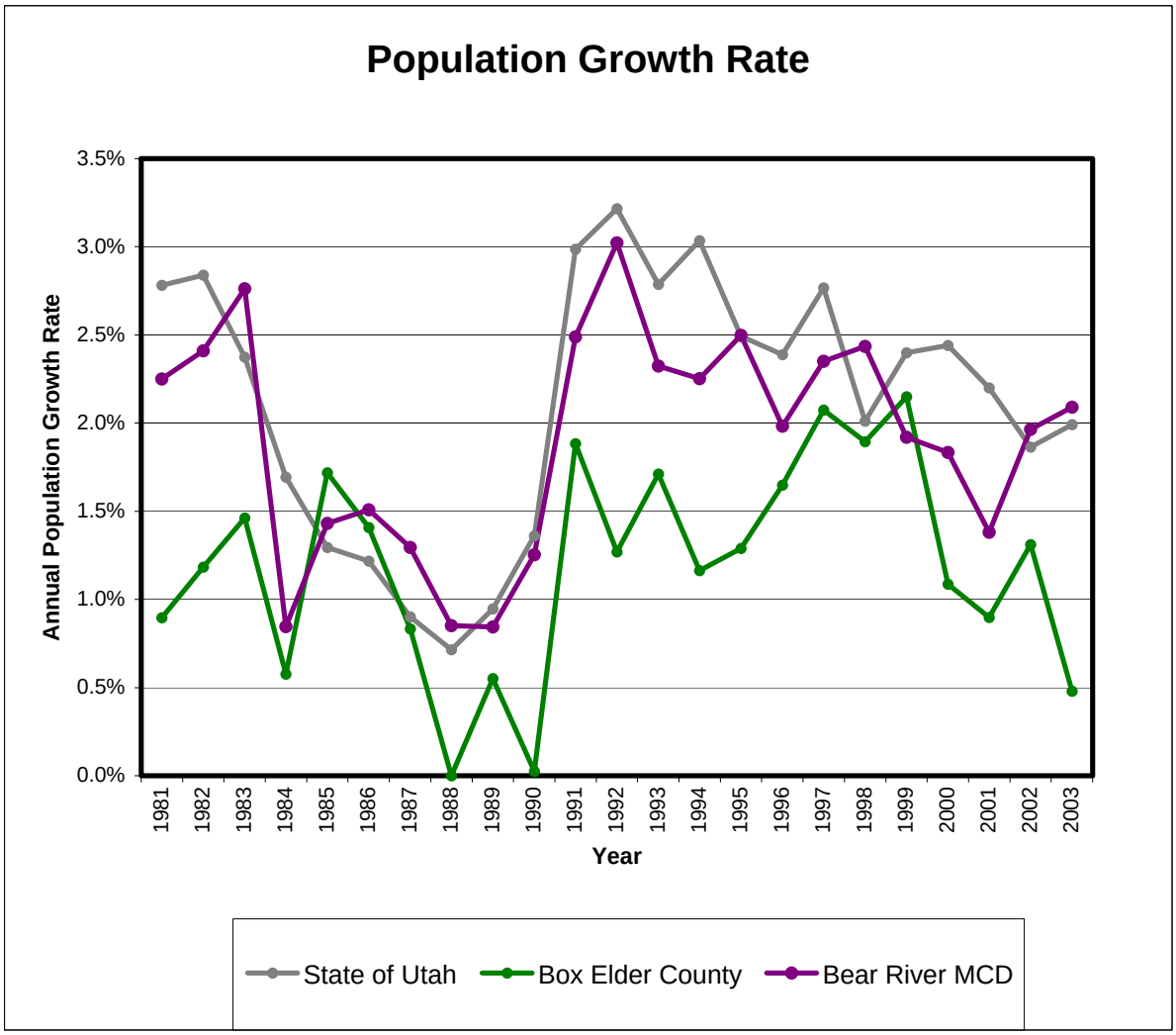
Chart 2-2. Population Change Data

Decade	State of Utah	Box Elder County	Tremonton City
1950-1960	29.29%	26.99%	27.26%
1960-1970	18.94%	12.24%	32.10%
1970-1980	37.93%	18.11%	23.98%
1980-1990	17.92%	9.82%	23.09%
1990-2000	29.62%	17.16%	31.14%



Source Data: U.S. Bureau of the Census
http://www.govenor.utah./dea/OtherPublications.html

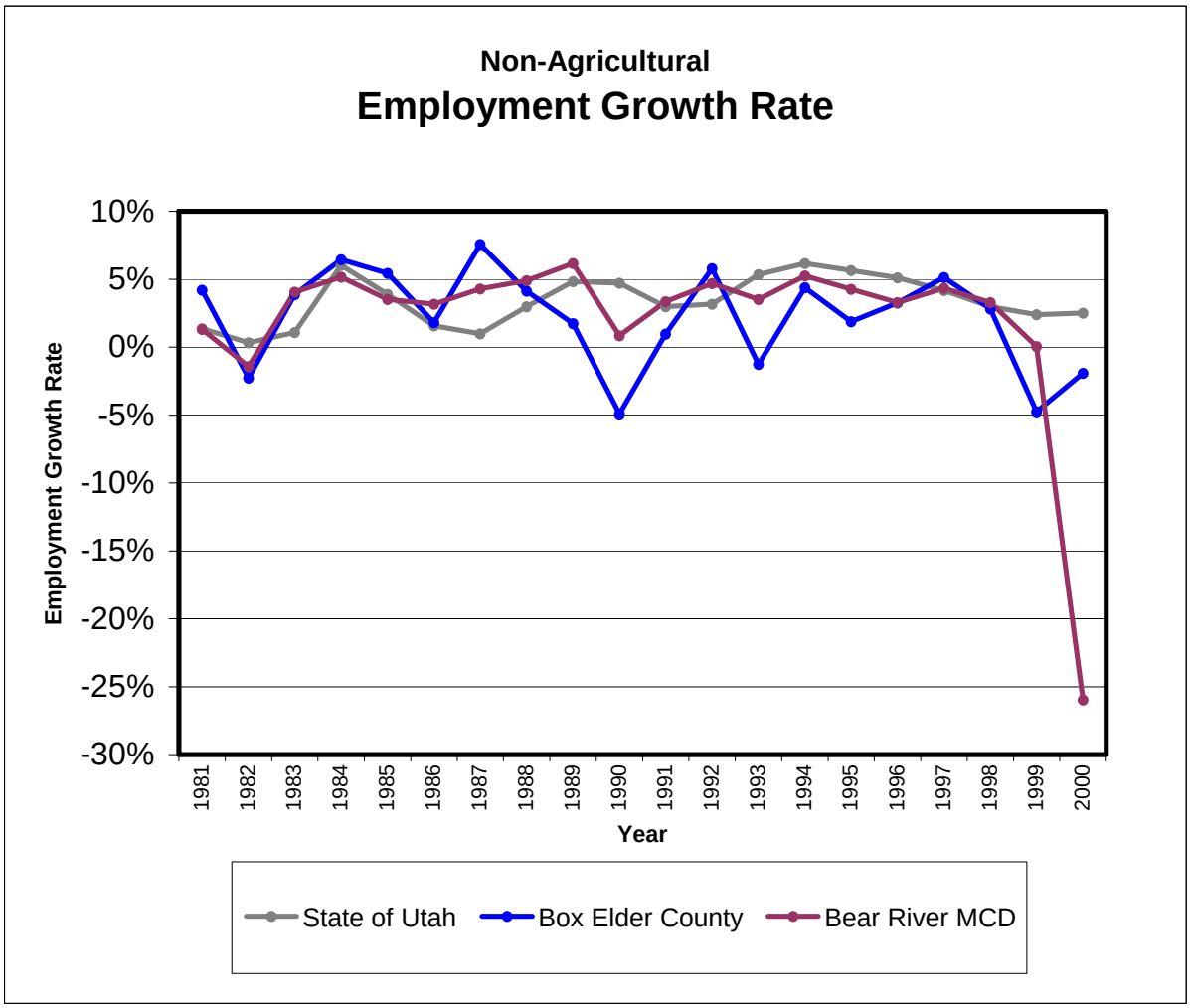
Chart 2-3. Population Growth Rate (1980-2000)



MCD = Multi-County Districts, Bear River MCD = Box Elder, Cache & Rich Counties

Source: Governors Office of Planning and Budget
http://www.governor.utah.gov/dea

Chart 2-4. Employment Growth Rate (1980-2000)



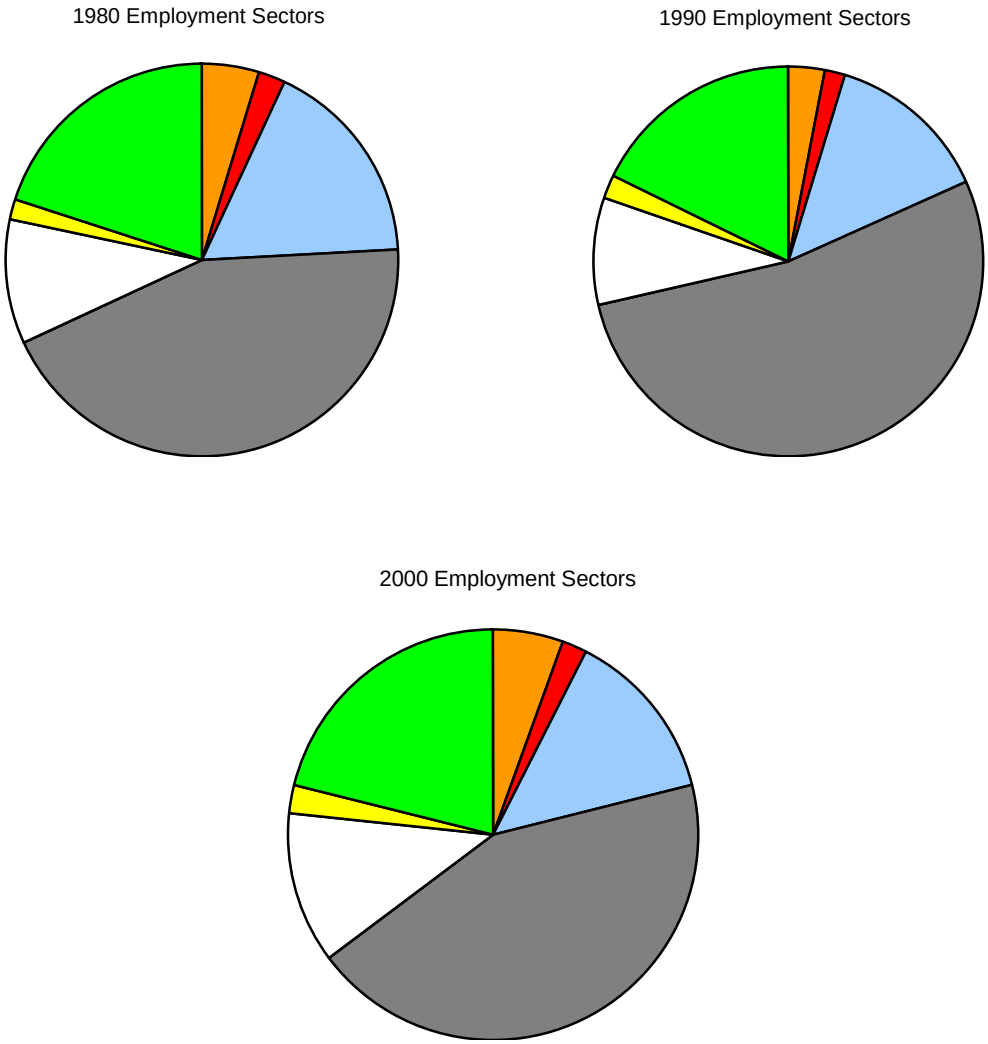
MCD = Multi-County Districts, Bear River MCD = Box Elder, Cache & Rich Counties

Source: Governors Office of Planning and Budget
http://www.governor.utah.gov/dea

Chart 2-5. Employment Sectors (1980-2000)

Sector	1980	1990	2000	Δ% 1980-2000
Construction	3.56%	2.37%	4.08%	79.52%
FIRE	1.71%	1.33%	1.60%	46.92%
Government	13.38%	10.70%	10.07%	17.86%
Manufacturing	33.75%	41.33%	32.79%	52.15%
Mining	0.05%	0.07%	0.13%	300.00%
Services	8.02%	6.98%	8.82%	72.09%
TCPU	1.28%	1.50%	1.83%	123.59%
Trade	15.39%	13.88%	15.75%	60.32%

FIRE = Finance, Insurance & Real Estate
TCPU = Telecommunications & Public Utilities



Source: Governors Office of Planning and Budget
http://www.governor.utah.gov/dea/HistoricalData.html

2.4. Functional Street Classification

This document identifies the current function and operational characteristics of the selected roadway network of Tremonton City. Functional street classification is a subjective means to identify how a roadway functions and operates when a combination of the roadway's characteristics are evaluated. These characteristics include; roadway configuration, right-of-way, traffic volume, carrying capacity, property access, speed limit, roadway spacing, and length of trips using the roadway.

The primary classifications used in classifying selected roadways of Tremonton City are: Interstate, Principle Arterial, Minor Arterial, Major Collector, Minor Collector and Local. An Arterial's function is to provide traffic mobility at higher speeds with limited property access. Traffic from the local roads is gathered by the Collector system, which provides a balance between mobility and property access trips. Local streets and roads serve property access based trips and these trips are generally shorter in length.

The Tremonton City area is accessed by SR-102 from I-15 as well as by I-84. SR-102 bisects the City East to West. SR-82 travels north out of the city to Garland, SR-13 travels north and South to Garland along the eastern border of the city. The functionally classified system is currently being revised statewide. The current functionally classified system generally defines the higher traffic roads, so only minor additions or changes will be required.

2.5 Bridges

There are fifteen bridges on the state system located in the study area that could be eligible for federal bridge maintenance, rehabilitation, or replacement funds. Bridges are maintained and minor repairs made with maintenance funds. A bridge is rehabilitated or replaced as it deteriorates over time and as traffic volumes increase. (Figure 2-3 Bridge Sufficiency Rating)

Table 2-1 compares the bridges in the study area and identifies their sufficiency rating and location. Sufficiency rating indicates current condition of the structure with a rating of 100 showing a structure that is in excellent shape. A rating nearing 50 will reveal a structure that is in need of attention and is eligible for federal funding.

Table 2-1. Bridges

Number	Location	Maximum Span	No. Lanes & Road Width	Sidewalk	Sufficiency Rating
OD-411	CORINNE CANEL	6.1 M	2 Lanes 10.6 M	No	74.1
1F 184	IOWA STRING RD.	18.6 M	2 Lanes 13.5 M	No	95.6
3F- 517	I-84/ I-15 Intg. SBL	41.5 M	2 Lanes 13.5 M	No	96.8
1F-517	I-84 / I-15 Intg. NBL	41.5 M	2 Lanes 9.1 M	No	78.6
3F-515	I-15/I-84 & Iowa String Rd.	32.9 M	2 Lanes 13.8 M	No	94.9
0E-2207	BOTHWELL CANAL Box Culvert	5.5 M	4 Lanes 23.2 M	No	80.1
0C-542	I-84 / SR-102	50.6 M	2 Lanes 14.1 M	No	96.7
0F-545	MALAD RIVER	18.9	2 Lanes 23.3 M	Yes	99.0
0D-446	CORINNE CANEL	9.1 M	2 Lanes 11.8 M	No	44.4
3F-316	I-15 So. Tremonton SBL	26.2 M	2 Lanes 15.9 M	No	93.6
1F- 316	I-15 So. Tremonton NBL	26.2 M	2 Lanes 13.5 M	No	92.6
1F-179	I-15 2.3 Mi NW Elwood Intg.	13.4 M	2 Lanes 13.5 M	No	93.6
3F-179	I-15 2.3 Mi. NW Elwood Intg.	13.4 M	2 Lanes 13.5 M	No	94.6
1E-2314	On-Ramp I-15 Box Culvert	7.3 M	1 Lane	No	98.3
2F-184	I-84 South Tremonton	18.6 M	2 Lanes 13.5 M	No	95.8

Source: Utah Department of Transportation/Structures Division

2.6 Traffic Counts

Recent average daily traffic count data were obtained from UDOT. Table 2-2 shows the traffic count data on the key roadways of the study area. The number of vehicles in both directions that pass over a given segment of roadway in a 24-hour period is referred to as the average annual daily traffic (AADT) for that segment.

Table 2-2. Average Annual Daily Traffic

Road	Segment	Year	AADT
SR-13	Junction SR-102 (Haws Corner)	2002	4,110
I-15	Southeast Incorporated Limits Tremonton	2002	17,649
I-15	On-Ramp from SR-84	2002	15,370
I-15	North Incorporated Limits (Garland)	2002	12,935
SR-82	Junction SR 102	2002	12,300
SR-82	1000 North in Garland	2002	9,865
I-84	Garland Interchange (Bothwell)	2002	11,655
I-84	Tremonton Logan (SR-102 West Tremonton)-SR-15	2002	9,539
SR-102	Junction I-84	2002	5,100
SR-102	West Incorporated Limits Tremonton	2002	7,805
SR-102	Junction SR-13	2002	7,390

Source: Utah Department of Transportation

**INCL=Incorporated City Limits*

Figure 2-2: Existing State and Federal Routes Functional Classification

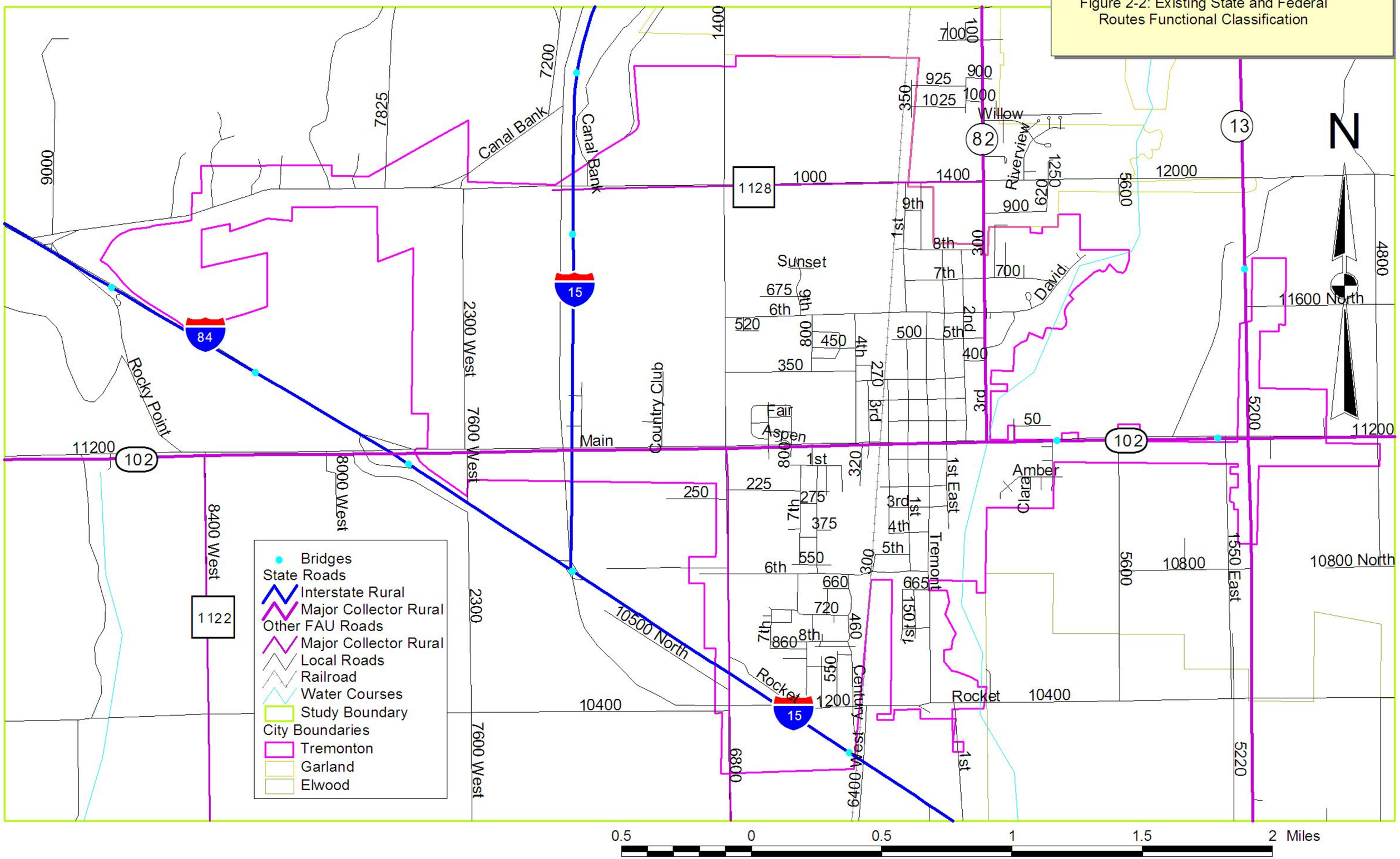
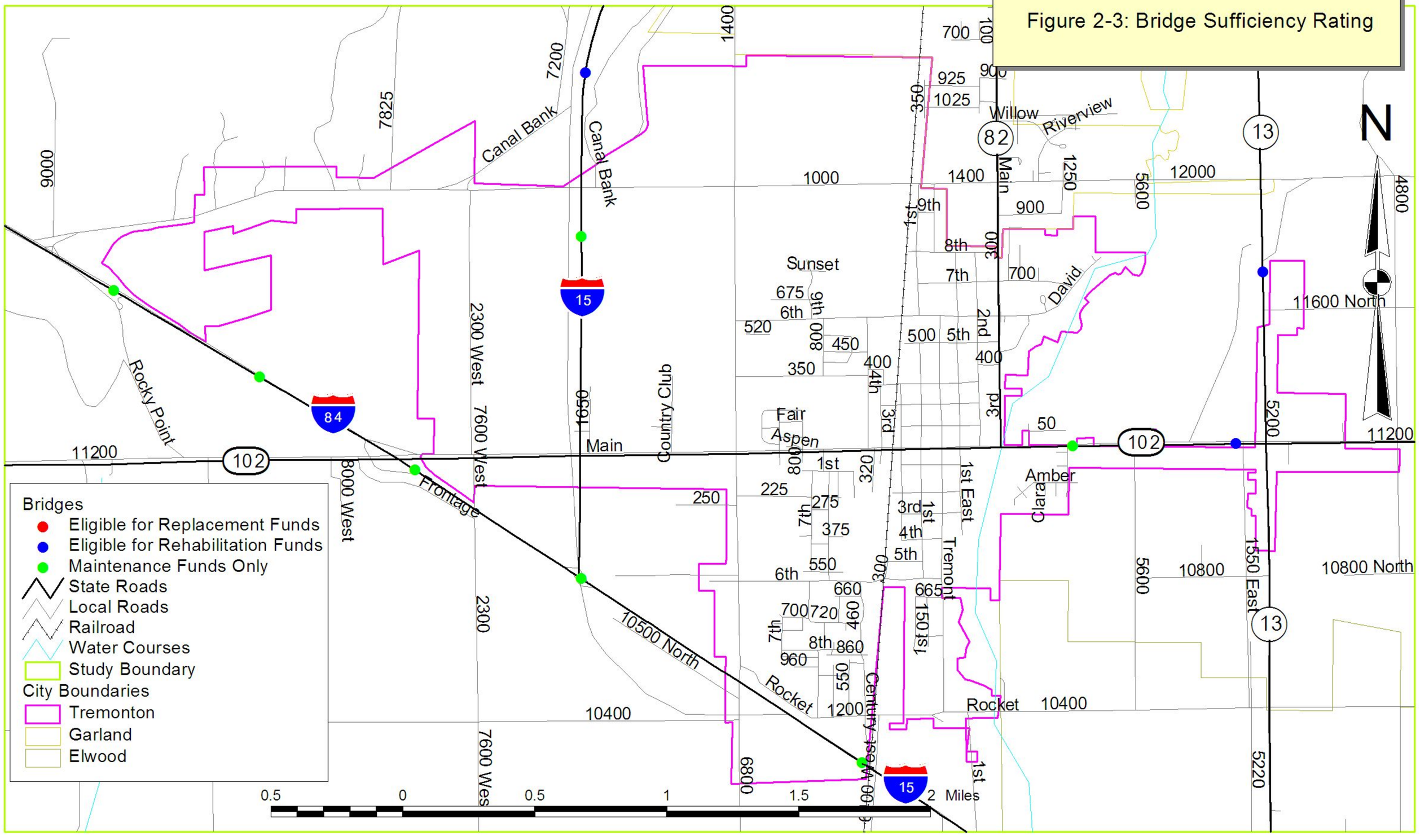


Figure 2-3: Bridge Sufficiency Rating



2.7 Traffic Accidents

Traffic accident data was obtained from UDOT's database of reported accidents from 2002. Table 2-3 summarizes the accident statistics for those segments for the year 2002. Additional information includes the average daily traffic, the number of reported accidents, and the accident rates. The roadway segment accident rates were determined in terms of accidents per million vehicle miles traveled. The crash rates for each roadway segment are compared to the expected crash rate for similar facilities across the state.

Upon review of the accident data for the state system, there appears to be a higher than expected accident rates at the following locations:

- SR-13 from MP 17.44 to MP 19.93
- SR-82 from MP 0.75 to MP 0.99
- I-84 from MP 41.09 to MP 43.0
- SR-102 from MP 12.0 to 18.0

The remainder of the state system shows a lower than expected accident rate. Figure 13 shows accident data taken from 1999-2001, which shows various segments of the state highway system and associated accident data.

Brigham City may wish to review the accident history for the local street system to identify any specific accident hot spot locations.

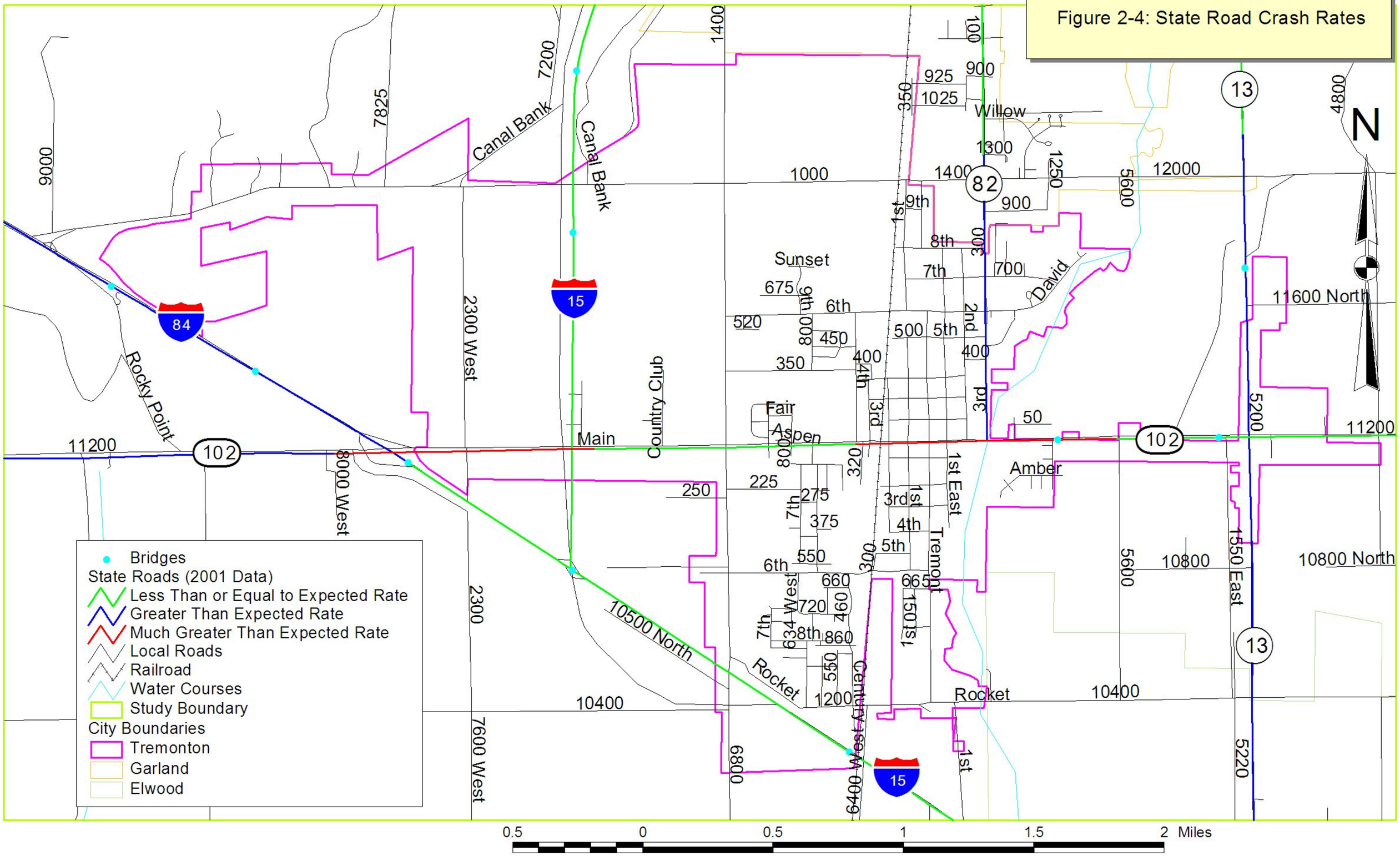
Table 2-3. Crash Data 2002

					Crash Rate	
Road	**From Milepost**	**End Milepost**	**ADT (2002)**	**# Crashes (2002)**	**Actual**	**Expected***
13	17.44	17.69	1370	1	8.5	2.53
13	17.7	19.93	6350	11	8.14	2.5
13	19.94	21.75	4110	1	0.85	2.28
15	377	380.35	17649	14	0.69	1.04
15	380.36	381.49	15370	2	0.33	1.04
15	381.49	383	12935	2	0.3	1.04
82	0	0.74	12300	4	1.27	4.34
82	0.75	0.99	9470	7	8.93	2.68
82	1	2	9865	5	1.47	2.68
84	38	39.73	11332	4	0.63	1.04
84	39.74	41.06	11655	5	1.02	1.04
84	41.09	43	9639	18	2.7	0.85
102	12	14.13	3000	6	4.02	2.28
102	14.14	14.39	5100	3	9.43	2.5
102	14.4	17.5	7805	24	2.85	2.68
102	17.51	18	7390	2	3.27	2.68
102	18.01	19	3450	2	2.13	2.28

* Statewide average accident rates for functional class and volume group.

Red indicates higher than expected rates of accidents

Figure 2-4: State Road Crash Rates



2.8 Bicycle and Pedestrian

The Federal Highway Administration recognizes the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system, and encourages state and local governments to incorporate all necessary provisions to accommodate bicycle and pedestrian traffic. In following this directive, Tremonton City is encouraged to adopt a "complete streets" philosophy that allows for the advancement of a transportation system for both motorized and non-motorized travel.

2.8.1 Biking/Trails

The City, with the support of individual effort and outside agency input, has developed a Tremonton Trail Study document that identifies plans for a Tremonton Trail. The study proposes a phased trail system, broken into four quadrant areas noted as the River Walk, Fair Way, Iowa String, and Garland trails. The document includes various trail related issues such as site location, implementation, trailhead facilities, landscaping options, and funding sources. The Study discusses issues and potential problems, such as trail sites that exist on private property and flood plain concerns along the Malad River. The document identifies concerns and makes recommendations that could possibly mitigate the concerns.

In addition to the Tremonton Trails Study, the Governor's Legacy Trails Initiative as included in the State's Long Range Plan, identifies a network of trails that when completed would ensure access to trails/paths within 15 minutes of home and work for all Utahns. One of these Legacy Trails is the Cold Water Canyon, a four-mile, unpaved trail located in close proximity to the Tremonton area.

2.8.2 Pedestrian

The City would like to create a more walkable community and increase pedestrian traffic. This goal may become a reality as the City continues to require developers to install sidewalks in all new developments.

Sidewalk exists in various locations throughout Tremonton City, although they are most prevalent in the downtown area. While there are areas of the City with newer sidewalks, there are also older sections of sidewalks within the City experiencing deteriorating conditions and creating a safety concern for pedestrians. Some of these problem areas include broken sidewalks where tree roots have created damage by breaking through the concrete, creating hazardous conditions for pedestrians. Limited funding has prevented the City from repairing all of these problem locations, however as funding becomes available sidewalk improvements will be made as needed. Tremonton City has used an innovative approach to improve some of the sidewalks in the community. By providing funding for replacement of a few smaller sections of sidewalk, the City utilized the services of the

local Boy Scouts who provided the manpower to install the new sections of sidewalk. This cost effective action provided a much-needed benefit to the community by creating a more pedestrian-friendly condition.

Tremonton's street grid consists of short blocks with crosswalks placed at intersections and at school sites. Due to the shorter street lengths, the City does not have any mid-block crosswalks. Crosswalks are in good condition with painting applied on a regularly scheduled basis or as needed.

2.9 Public Transportation

Tremonton does not have an intracity bus system and it is not connected to the Utah Transit Authority, who's nearest service is in Brigham City. Tremonton is interested in working with UTA to include connecting bus service to and from the northern terminal of the proposed Wasatch Front commuter rail operation at Brigham City.

Greyhound Lines provides intercity bus service to Tremonton with a stop at the Golden Spike Travel Plaza/Chevron located at 2410 West Main near the junction of I-84/I-15. Greyhound service to Tremonton consists of three buses each way daily along the route linking Salt Lake City with Boise and Portland.

The nearest intercity rail passenger service is provided by Amtrak's "California Zephyr," which serves Salt Lake City as a part of its daily operation between Chicago, Denver, and the San Francisco Bay Area.

The nearest scheduled airline service is provided at the Salt Lake City International Airport, which is 65 miles to the south.

2.10 Freight

2.10.1 Freight by Highway

Tremonton is in a very advantageous location for transportation-based industrial development with its location at the junction of two of western America's most important freight highways, Interstates 15 and 84.

I-15 is the key element of the "Canamex Corridor" linking Canada with Mexico as a result of the North American Free Trade Agreement (NAFTA) Treaty. This route is not only the highway backbone of Utah and the Mountain West, but a main freight route to southern Nevada and southern California with connecting routes to Arizona.

I-84 is the primary freight corridor linking the Midwest and South with the Pacific Northwest via its connection with I-80 at Echo Junction, Utah, 62 miles southeast of Tremonton.

State Route 30 links Logan and the Cache Valley with I-15 at Riverside, only seven miles north of the I-15/I-84 junction in Tremonton. Freight traffic to and from the Cache Valley and the Pacific Northwest or Canada is increasingly using this route to access the Interstate Highway system. As such, S.R. 30 is rapidly becoming the primary freight corridor serving the fast-growing Cache Valley.

With easy access to major freight highways, Tremonton's central location in the Mountain West puts it only a single day's drive (less than 11 hours) from west coast seaports, industrial centers and markets, as well as those in Colorado, Arizona, and

Nevada. Tremonton's transportation crossroads status combined with the low cost inherent in its rural location, make it attractive to many industries.

In addition to the thousands of long-haul trucks which pass through the Tremonton area each week on these three important freight routes, more than 350 trucks per week serve the six major industries at the Tremonton Industrial Park. This number will increase to over 400 trucks per week by 2006. Located on the northwest side of town, Tremonton's industrial park has easy access to both interstates via Exit 383 on I-15. Trucks wishing to reach the industrial park from Exit 40 on I-84 are hampered by the lack of a traffic signal at the intersection of 10th West and Main Street. Local street infrastructure is the primary challenge associated with future growth in freight transportation in Tremonton.

2.10.2 Freight by Railroad

On May 10, 1869, the famous Golden Spike was driven at Promontory, Utah, less than 20 miles southwest of Tremonton, marking the completion of America's first transcontinental railroad. Although not located on that original east/west route, rail freight service to Tremonton is provided by Union Pacific's Malad Branch, which connects with UP's secondary mainline between Ogden and Pocatello at Brigham City.

Train operations in Tremonton consist of the UP "Malad Local," which operates daily except Saturdays between Brigham City and the Nucor Steel Mill in Plymouth via Tremonton. Freight cars traveling to and from Tremonton are handled by the Malad Local, which connects with a similar train operating between Brigham City and Ogden, where mainline connections are made nationwide.

The Tremonton Industrial Park has a rail spur off the Malad Branch which is owned by the city and maintained by UP. Currently only one industry, Intertape, Inc., uses this spur, receiving an average of four 100-ton capacity covered hopper cars of plastic pellets per week from either Texas or Alberta petrochemical plants. Plans are in the works to extend the spur west through T & M Manufacturing's facility to serve the expanding Malt-O-Meal complex within the next three years.

Both Intertape and the Union Pacific report difficulties in serving the Tremonton industrial spur owing to the current layout of the switch connecting the spur with the UP branch.

2.11 Aviation Facilities & Operations

There is no longer an airport in Tremonton; the nearest airport facilities are located in Brigham City.

2.12 Revenue

Maintenance of existing transportation facilities and construction of new facilities come primarily from revenue sources that include the Tremonton City general fund, federal funds and State Class C funds.

Financing for local transportation projects consists of a combination of federal, state, and local revenues. However, this total is not entirely available for transportation improvement projects, since annual operating and maintenance costs must be deducted from the total revenue. In addition, the City is limited in their ability to subsidize the transportation budget from general fund revenues.

2.12.1 State Class B and C Program

The distribution of Class B and C Program monies is established by state legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Twenty-five percent of the funds derived from the taxes and fees are distributed to cities and counties for construction and maintenance programs.

Class B and C funds are allocated to each city and county by the following formula: 50% based on the population ratio of the local jurisdiction with the population of the State, 50% based on the ratio that the Class B roads weighted mileage within each county and the class C roads weighted mileage within each municipality bear to the total class B and Class C roads weighted mileage within the state. Weighted means the sum of the following: (i) paved roads multiplied by five; (ii) graveled road miles multiplied by two; and (iii) all other road types multiplied by one. (Utah Code 72-2-108) For more information go to UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select the tab for "Local Government Assistance" here you will find the Regulations governing Class B&C funds

The table below identifies the ratio used to determine the amount of B and C funds allocated.

Apportionment Method of Class B and C Funds

Based on	Of
50%	Roadway Mileage *Based on Surface Type Classification (Weighted Measure) Pave Road (X 5) Graveled Road (X 2) Other Road (X 1)
50%	Total Population

Class B and C funds can be used for maintenance and construction of highways, however thirty percent of the funds must be used for construction or maintenance projects that exceed $40,000. Class B and C funds can also be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

Tremonton City received $234,047.85 in 2003 for its Class C fund allocation.

2.12.2 Federal Funds

There are federal monies that are available to cities and counties through federal-aid program. The funds are administered by the Utah Department of Transportation. In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) provides funding for any road that is functionally classified as a collector street or higher. STP funds can be used for a range of projects including rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the State for urban areas. A portion of the STP funds can be used in any area of the State, at the discretion of the State Transportation Commission.

Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Advisory Committee reviews the applications and then a portion of those are recommended to the State Transportation Commission for funding. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities to water runoff mitigation. Other funds that are available are State Trails Funds, administered by the Division of Wildlife Resources.

The amount of money available for projects specifically in the study area varies each year depending on the planned projects in UDOT's Region One. As a result, federal aid program monies are not listed as part of the study area's transportation revenue.

2.12.3 Local Funds

Tremonton City, like most cities, has utilized general fund revenues in its transportation program. Other options available to improve the City's transportation facilities could involve some type of bonding arrangement, either through the creation of a redevelopment district or a special improvement district. These districts are organized for the purpose of funding a single, specific project that benefits and identifiable group of properties. Another source is through general obligation bonding arrangements for projects felt to be beneficial to the entire entity issuing the bonds.

2.12.4 Private Sources

Private interests often provide alternative funding for transportation improvements. Developers construct the local streets within the subdivisions and often dedicate right-of-way and participate in the construction of collector or arterial streets adjacent to their developments. Developers can be considered as an alternative source of funds for projects because of the impacts of the development, such as the need for traffic signals or street widening. Developers should be expected to mitigate certain impacts resulting from their developments. The need for improvements, such as traffic signals or street widening can be mitigated through direct construction or impact fees.

3. Future Conditions

3.1 Land Use and Growth

Tremonton's Transportation Master Plan must be responsive to current and future needs of the area. The area's growth must be estimated and incorporated into the evaluation and analysis of future transportation needs. This is done by:

- Forecasting future population, employment, and land use;
- Projecting traffic demand;
- Forecasting roadway travel volumes;
- Evaluating transportation system impacts;
- Documenting transportation system needs; and
- Identifying improvements to meet those needs.

This chapter summarizes the population, employment, and land use projections developed for the project study area. Future traffic volumes for the major roadway segments are based on projections utilizing 20 years of traffic count history. The forecasted traffic data are then used to identify future deficiencies in the transportation system.

3.1.1 Population and Employment Forecasts

The Governor's Office of Planning and Budget develop population and employment projections. The current population and employment levels, as well as the future projections for each are shown for Tremonton and Box Elder County in the following table.

Population and Employment

Year	City	County	
	Population	Population	Employment
2000	5,592	42,745	19,311
2030	10,852	70,755	29,685

3.1.2 Future Land Use

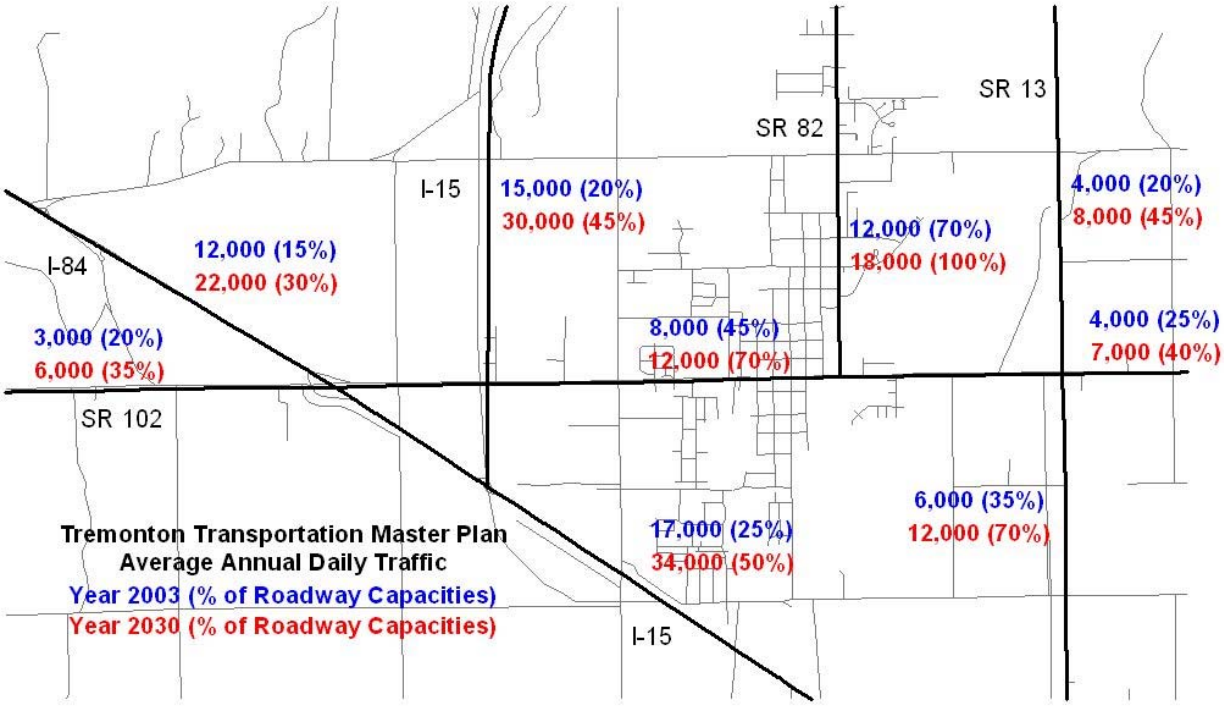
The City has an annexation plan that describes where it plans to grow. Some areas for developments were discussed during the course of the Transportation Master Plan. Updated Land Use documents can be found in the Tremonton General Plan.

While specific development plans change with time, it is important to note possible areas of development within the Tremonton area. Commercial and industrial growth is also important in understanding transportation needs.

3.2 Traffic Forecast

Traffic in the Tremonton area is growing and will continue to grow. The population projections from the Governors Office of Planning and Budget show about 50% growth from 2000 to 2030. Traffic growth has historically grown at about 1.5% to 3.5% annually. Growth will be different on the various corridors in the Tremonton area based on the future land use planned. For instance it is estimated that traffic volumes on SR 102 in downtown Tremonton will grow about 2.5% per year, while the SR 13 will experience a 3.5% growth due to its growth potential. The map on the following page shows average annual daily traffic for years 2003 and 2030. Also shown is the percentage of the roadway capacity the

traffic will reach. The map illustrates that a few corridors could have capacity issues by the year 2030 if historical trends continue. The most congested corridor in the future will probably be SR 82 unless the capacity of the road is improved.



Next 10 sheets are:

Traffic Forecast Sheets

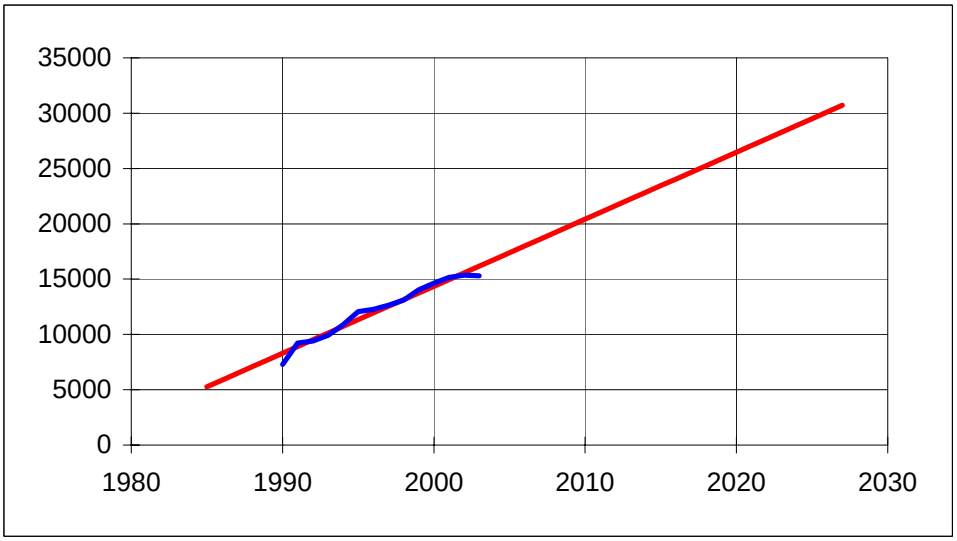
Route *I-15*

Limits *N of I-84*

Year	AADT	Forecast
1985		5269
1986		5875
1987		6481
1988		7087
1989		7693
1990	7,285	8298
1991	9,240	8904
1992	9,400	9510
1993	9,930	10116
1994	10,884	10722
1995	12,068	11328
1996	12,260	11934
1997	12,640	12540
1998	13,110	13145
1999	14,020	13751
2000	14,640	14357
2001	15,165	14963
2002	15,370	15569
2003	15,300	16175
2004		16781
2005		17386
2006		17992
2007		18598
2008		19204
2009		19810
2010		20416
2011		21022
2012		21627
2013		22233
2014		22839
2015		23445
2016		24051
2017		24657
2018		25263
2019		25868
2020		26474
2021		27080
2022		27686
2023		28292
2024		28898
2025		29504
2026		30109
2027		30715

Projection based on 1989 to 2003 data

4.0% growth rate → 606 vehicles/year



Notes

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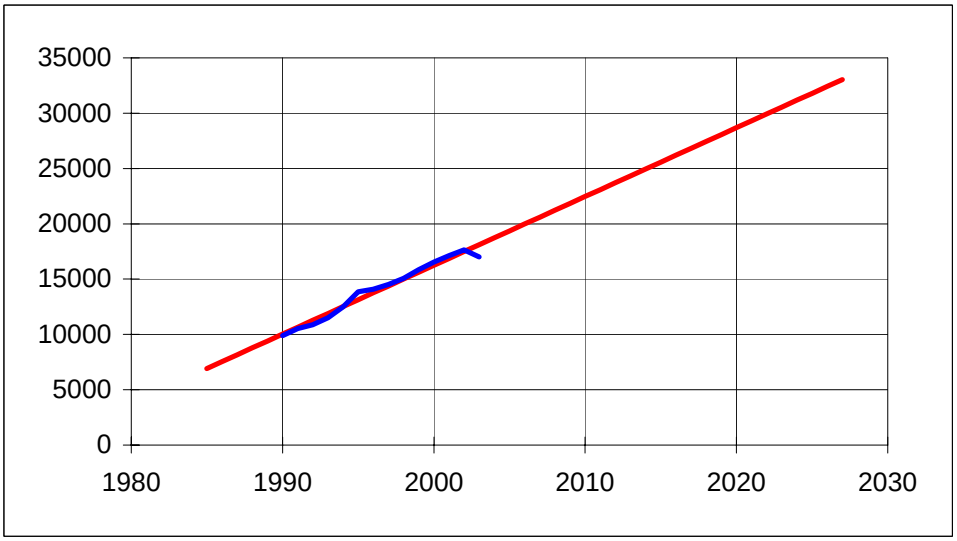
Route *I-15*

Limits *S of Tremonton*

Year	AADT	Forecast
1985		6921
1986		7543
1987		8164
1988		8786
1989		9408
1990	9,900	10030
1991	10,520	10652
1992	10,890	11274
1993	11,500	11896
1994	12,500	12517
1995	13,865	13139
1996	14,085	13761
1997	14,520	14383
1998	15,060	15005
1999	15,844	15627
2000	16,540	16248
2001	17,135	16870
2002	17,649	17492
2003	17,000	18114
2004		18736
2005		19358
2006		19980
2007		20601
2008		21223
2009		21845
2010		22467
2011		23089
2012		23711
2013		24333
2014		24954
2015		25576
2016		26198
2017		26820
2018		27442
2019		28064
2020		28686
2021		29307
2022		29929
2023		30551
2024		31173
2025		31795
2026		32417
2027		33039

Projection based on 1989 to 2003 data

3.7% growth rate → 622 vehicles/year



Notes

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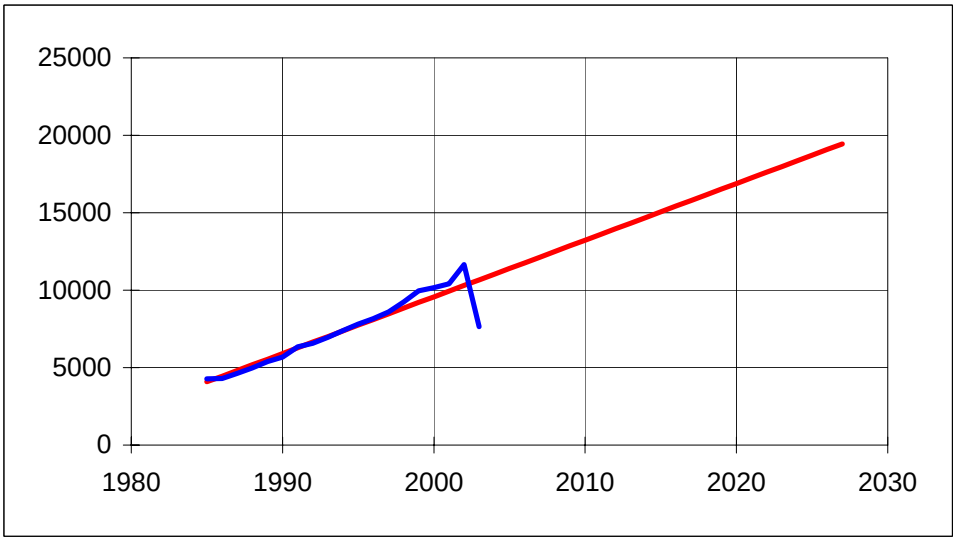
Route *I-84*

Limits *N of SR 102*

Year	AADT	Forecast
1985	4,280	4084
1986	4,300	4450
1987	4,620	4816
1988	4,970	5181
1989	5,395	5547
1990	5,690	5913
1991	6,350	6279
1992	6,570	6645
1993	6,955	7011
1994	7,400	7376
1995	7,810	7742
1996	8,155	8108
1997	8,587	8474
1998	9,240	8840
1999	9,965	9206
2000	10,165	9571
2001	10,404	9937
2002	11,655	10303
2003	7,640	10669
2004		11035
2005		11401
2006		11766
2007		12132
2008		12498
2009		12864
2010		13230
2011		13596
2012		13961
2013		14327
2014		14693
2015		15059
2016		15425
2017		15790
2018		16156
2019		16522
2020		16888
2021		17254
2022		17620
2023		17985
2024		18351
2025		18717
2026		19083
2027		19449

Projection based on 1985 to 2003 data

3.7% growth rate → 366 vehicles/year



Notes

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Route *SR 102*

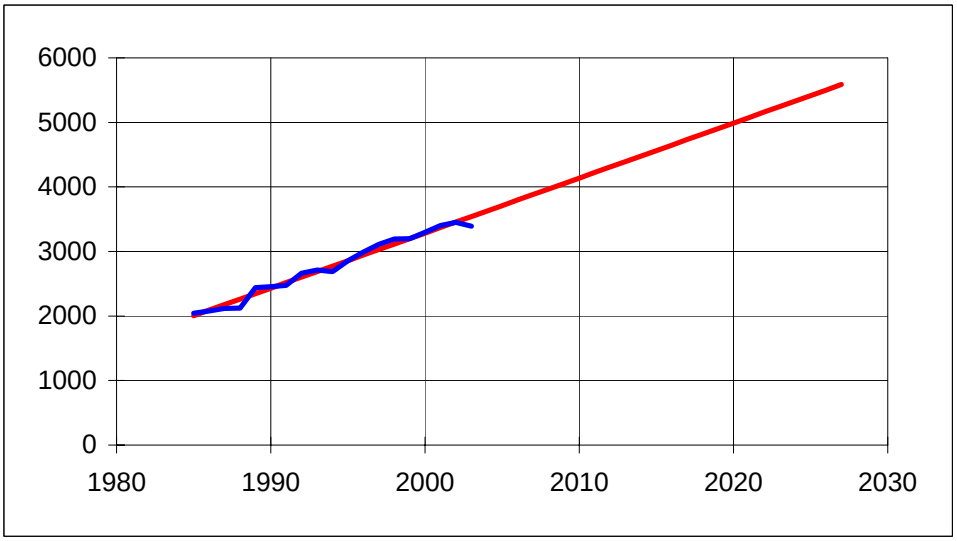
Limits *East of Tremonton*

milepost 19

Year	AADT	Forecast
1985	2,045	2006
1986	2,080	2091
1987	2,115	2176
1988	2,120	2261
1989	2,440	2347
1990	2,455	2432
1991	2,475	2517
1992	2,665	2602
1993	2,710	2688
1994	2,690	2773
1995	2,855	2858
1996	2,990	2943
1997	3,110	3029
1998	3,195	3114
1999	3,200	3199
2000	3,300	3284
2001	3,400	3370
2002	3,450	3455
2003	3,390	3540
2004		3626
2005		3711
2006		3796
2007		3881
2008		3967
2009		4052
2010		4137
2011		4222
2012		4308
2013		4393
2014		4478
2015		4563
2016		4649
2017		4734
2018		4819
2019		4904
2020		4990
2021		5075
2022		5160
2023		5246
2024		5331
2025		5416
2026		5501
2027		5587

Projection based on 1985 to 2003 data

2.5% growth rate → 85 vehicles/year



4% Trucks

Notes

3/6/2006

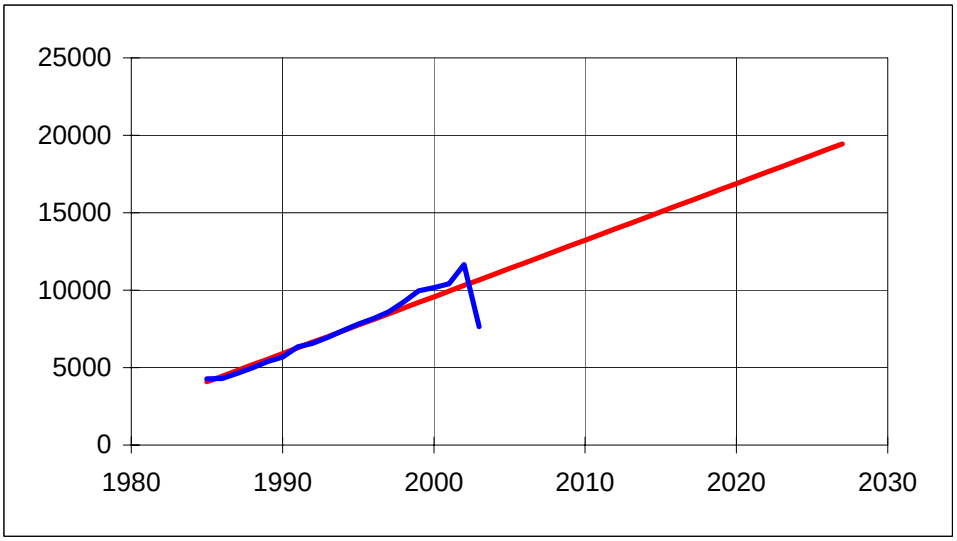
Route *I-84*

Limits *N of SR 102*

Year	AADT	Forecast
1985	4,280	4084
1986	4,300	4450
1987	4,620	4816
1988	4,970	5181
1989	5,395	5547
1990	5,690	5913
1991	6,350	6279
1992	6,570	6645
1993	6,955	7011
1994	7,400	7376
1995	7,810	7742
1996	8,155	8108
1997	8,587	8474
1998	9,240	8840
1999	9,965	9206
2000	10,165	9571
2001	10,404	9937
2002	11,655	10303
2003	7,640	10669
2004		11035
2005		11401
2006		11766
2007		12132
2008		12498
2009		12864
2010		13230
2011		13596
2012		13961
2013		14327
2014		14693
2015		15059
2016		15425
2017		15790
2018		16156
2019		16522
2020		16888
2021		17254
2022		17620
2023		17985
2024		18351
2025		18717
2026		19083
2027		19449

Projection based on 1985 to 2003 data

3.7% growth rate → 366 vehicles/year



Notes

3/6/2006

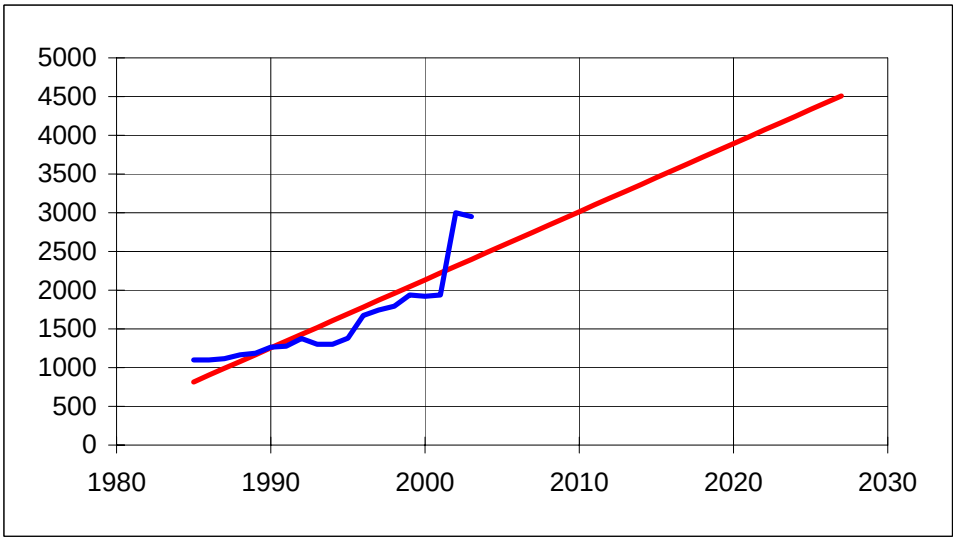
Route *SR 102*

Limits *West of I-84*

Year	AADT	Forecast
1985	1,100	815
1986	1,100	903
1987	1,115	991
1988	1,165	1079
1989	1,185	1167
1990	1,265	1255
1991	1,275	1343
1992	1,375	1431
1993	1,300	1519
1994	1,300	1606
1995	1,380	1694
1996	1,675	1782
1997	1,745	1870
1998	1,795	1958
1999	1,938	2046
2000	1,920	2134
2001	1,940	2222
2002	3,000	2310
2003	2,950	2398
2004		2486
2005		2574
2006		2662
2007		2750
2008		2838
2009		2926
2010		3014
2011		3102
2012		3190
2013		3277
2014		3365
2015		3453
2016		3541
2017		3629
2018		3717
2019		3805
2020		3893
2021		3981
2022		4069
2023		4157
2024		4245
2025		4333
2026		4421
2027		4509

Projection based on 1985 to 2003 data

4.0% growth rate → 88 vehicles/year



4% Trucks

Notes

3/6/2006

Route *SR 102*

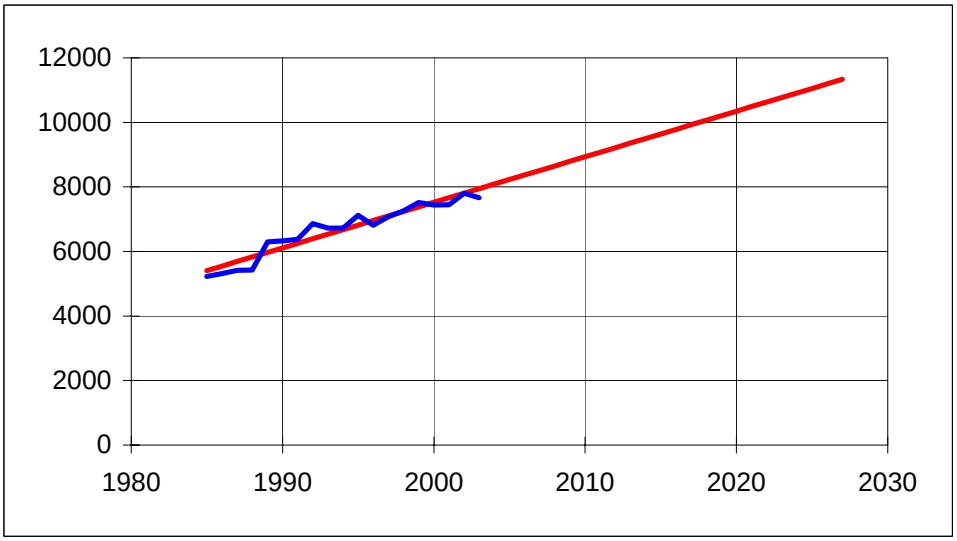
Limits *Downtown Tremonton*

milepost 17.5

Year	AADT	Forecast
1985	5,225	5405
1986	5,320	5546
1987	5,415	5688
1988	5,425	5829
1989	6,295	5970
1990	6,325	6111
1991	6,375	6252
1992	6,860	6394
1993	6,720	6535
1994	6,720	6676
1995	7,125	6817
1996	6,815	6958
1997	7,085	7099
1998	7,262	7241
1999	7,520	7382
2000	7,435	7523
2001	7,445	7664
2002	7,805	7805
2003	7,670	7947
2004		8088
2005		8229
2006		8370
2007		8511
2008		8652
2009		8794
2010		8935
2011		9076
2012		9217
2013		9358
2014		9500
2015		9641
2016		9782
2017		9923
2018		10064
2019		10205
2020		10347
2021		10488
2022		10629
2023		10770
2024		10911
2025		11052
2026		11194
2027		11335

Projection based on 1985 to 2003 data

1.8% growth rate → 141 vehicles/year



4% Trucks

Notes

3/6/2006

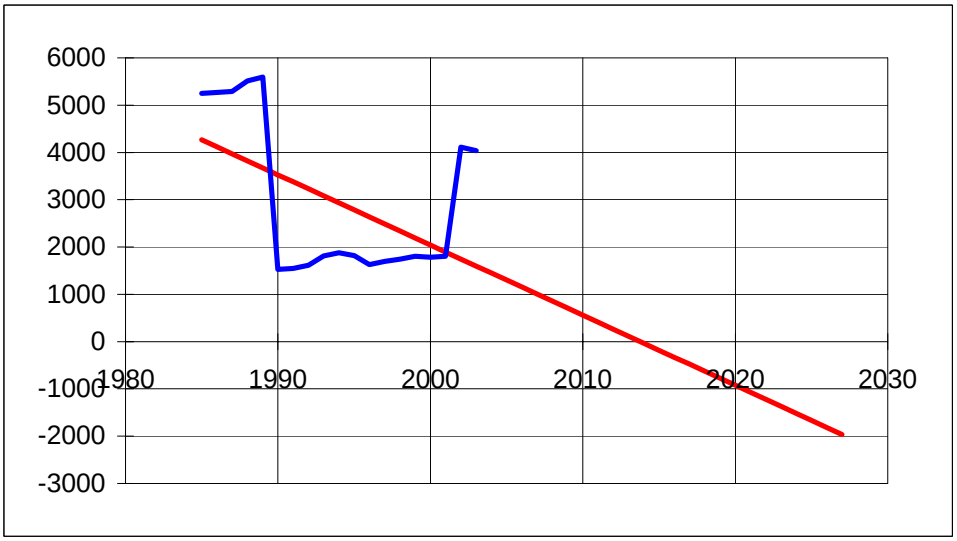
Route *SR 13*

Limits *N of SR 102*

Year	AADT	Forecast
1985	5,250	4268
1986	5,270	4120
1987	5,290	3971
1988	5,515	3823
1989	5,595	3675
1990	1,530	3526
1991	1,545	3378
1992	1,615	3230
1993	1,810	3081
1994	1,880	2933
1995	1,815	2785
1996	1,630	2636
1997	1,695	2488
1998	1,743	2340
1999	1,805	2191
2000	1,785	2043
2001	1,805	1895
2002	4,110	1746
2003	4,040	1598
2004		1450
2005		1301
2006		1153
2007		1005
2008		856
2009		708
2010		559
2011		411
2012		263
2013		114
2014		-34
2015		-182
2016		-331
2017		-479
2018		-627
2019		-776
2020		-924
2021		-1072
2022		-1221
2023		-1369
2024		-1517
2025		-1666
2026		-1814
2027		-1962

Projection based on 1985 to 2003 data

-7.8% growth rate ⟶ (148) vehicles/year



4% Trucks

Notes

3/6/2006

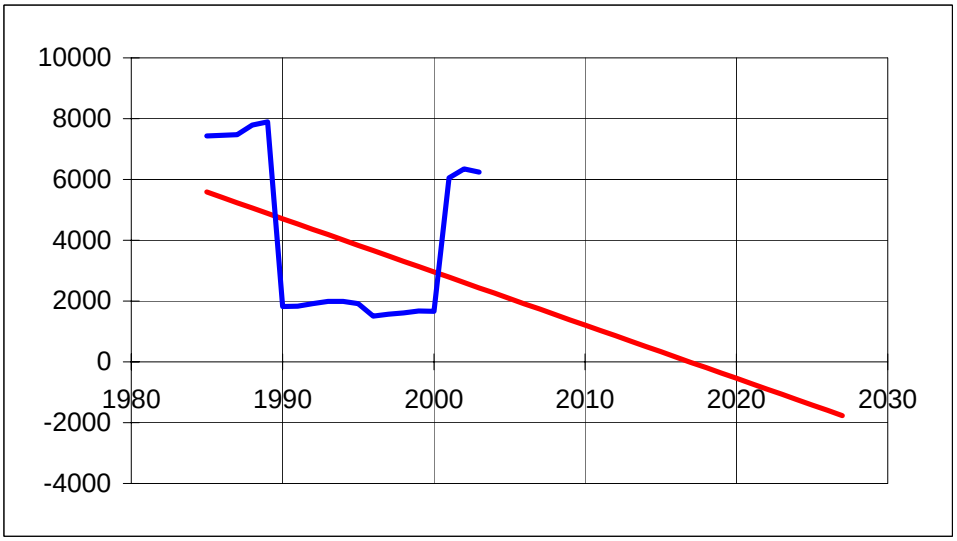
Route *SR 13*

Limits *S of SR 102*

Year	AADT	Forecast
1985	7,430	5585
1986	7,450	5410
1987	7,470	5235
1988	7,785	5060
1989	7,895	4885
1990	1,820	4710
1991	1,835	4535
1992	1,920	4360
1993	1,990	4185
1994	1,990	4009
1995	1,920	3834
1996	1,510	3659
1997	1,570	3484
1998	1,615	3309
1999	1,675	3134
2000	1,660	2959
2001	6,055	2784
2002	6,350	2609
2003	6,240	2434
2004		2259
2005		2084
2006		1909
2007		1734
2008		1559
2009		1384
2010		1209
2011		1034
2012		859
2013		684
2014		509
2015		334
2016		159
2017		-16
2018		-191
2019		-366
2020		-541
2021		-716
2022		-892
2023		-1067
2024		-1242
2025		-1417
2026		-1592
2027		-1767

Projection based on 1985 to 2003 data

-6.3% growth rate → (175) vehicles/year



4% Trucks

Notes

3/6/2006

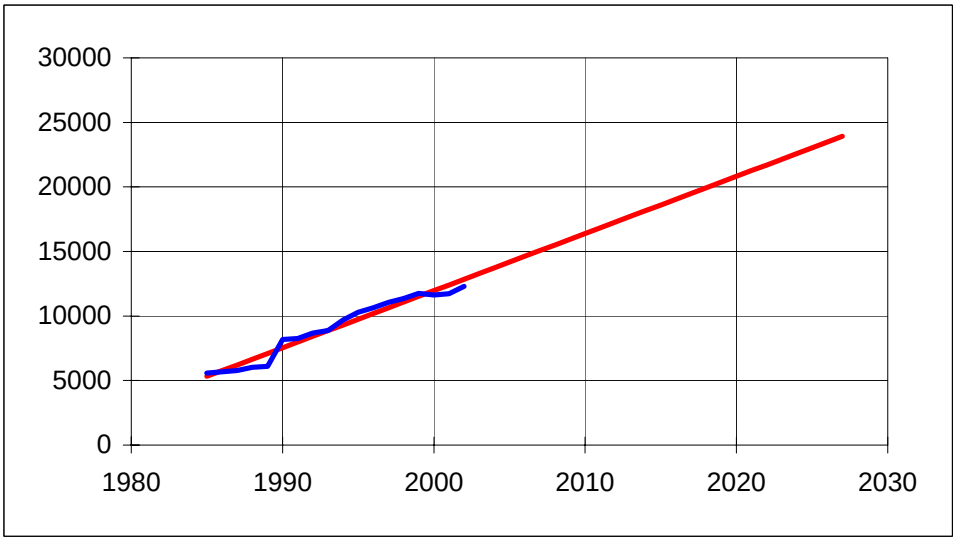
Route *SR 82*

Limits *N of SR 102*

Year	AADT	Forecast
1985	5,575	5324
1986	5,675	5767
1987	5,775	6209
1988	6,020	6652
1989	6,105	7095
1990	8,185	7537
1991	8,245	7980
1992	8,690	8423
1993	8,885	8866
1994	9,695	9308
1995	10,280	9751
1996	10,630	10194
1997	11,050	10636
1998	11,350	11079
1999	11,755	11522
2000	11,620	11965
2001	11,730	12407
2002	12,300	12850
2003		13293
2004		13735
2005		14178
2006		14621
2007		15064
2008		15506
2009		15949
2010		16392
2011		16834
2012		17277
2013		17720
2014		18162
2015		18605
2016		19048
2017		19491
2018		19933
2019		20376
2020		20819
2021		21261
2022		21704
2023		22147
2024		22590
2025		23032
2026		23475
2027		23918

Projection based on 1985 to 2003 data

3.6% growth rate → 443 vehicles/year



Notes

3/6/2006

4. Planning Issues and Guidelines

Provided below is a discussion of various issues with a focus on elements that promote a safe and efficient transportation system in the future.

4.1 Guidelines and Policies

These guidelines address certain areas of concern that are applicable to Tremonton's Transportation Master Plan.

4.1.1 Access Management

This section will define and describe some of the aspects of Access Management for roadways and why it is so important. Access Management can make many of the roads in a system work better and operate more safely if properly implemented. There are many benefits to properly implemented access management. Some of the benefits follow:

- Reduction in traffic conflicts and accidents
- Reduced traffic congestion
- Preservation of traffic capacity and level of service
- Improved economic benefits businesses and service agencies
- Potential reductions in air pollution from vehicle exhausts

4.1.1.1 Definition

Access management is the process of comprehensive application of traffic engineering techniques in a manner that seeks to optimize highway system performance in terms of safety, capacity, and speed. Access Management is one tool of many that makes a traffic system work better with what is available.

4.1.1.2 Access Management Techniques

There are many techniques that can be used in access management. The most common techniques are signal spacing, street spacing, access spacing, and interchange to crossroad access spacing. There are various distances for each spacing, dependant upon the roadway type being accessed and the accessing roadway. UDOT has developed an access management program and more information can be gathered from the UDOT website and from the Access Management Program Coordinator.

4.1.1.3 Where to Use Access Management

Access Management can be used on any roadway. In some cases, such as State Highways, access management is a requirement. Access management can be used as an inexpensive way to improve performance on a major roadway that is increasing in volume. Access management should be used on new roadways and roadways that are to be improved so as to prolong the usefulness of the roadway.

4.1.2 Context Sensitive Solutions

Context Sensitive Solutions (CSS) addresses the need, purpose, safety and service of a transportation project, as well as the protection of scenic, aesthetic, historic, environmental and other community values. CSS is an approach to transportation solutions that find, recognize and incorporate issues/factors that are part of the larger context such as the physical, social, economic, political and cultural impacts. When this approach is used in a project the project become better for all of the entities involved.

4.1.3. Recommended Roadway Cross Sections

Cross sections are the combination of the individual design elements that constitute the design of the roadway. Cross section elements include the pavement surface for driving and parking lanes, curb and gutter, sidewalks and additional buffer/landscape areas. Right-of-way is the total land area needed to provide for the cross section elements. Tremonton has formulated cross sections for all of its streets. Diagram 2.07.021 of the General Plan gives the right-of-way widths and the roadway widths for the different functional classes of roads. Also shown in Diagram 2.07.021 are schematics of the typical cross section for roads with and without sidewalk and park strip.

The design of the individual roadway elements depends on the intended use of the facility. Roads with higher design volumes and speeds need more travel lanes and wider right-of-way than low volume, low speed roads. The high use roadway type should include wider shoulders and medians, separate turn lanes, dedicated bicycle lanes, elimination of on street parking, and control of driveway access. For most roadways, an additional buffer area is provided beyond the curb line. This buffer area accommodates the sidewalk area, landscaping, and local utilities. Locating the utilities outside the traveled way minimizes traffic disruption in utility repairs or changes in service are needed.

Federal Highway standard widths apply on the all roads that are part of the state highway system. Also, all federally funded roadways in Tremonton City and Box Elder County must adhere to the same standards for widths and design.

4.2. Bicycles and Pedestrians

4.2.1 Bicycles/Trails

Bicycles are allowed on all roadways, except where legally prohibited, and as such should be a consideration on all roads that are being designed and constructed, and as roadway improvements are taking place. To increase the level of interest in bicycling in the Tremonton City area, the City should encourage developers to include separate bicycle/pedestrian pathways in all new developments. Opportunities to include bike lanes and increased shoulder width in conjunction with a roadway project should be taken whenever technically, environmentally, and financially feasible. The City is encouraged to follow the recommendations laid out in the Tremonton Trail Study and develop the trails system referenced in Chapter 2 of this Plan.

It is important to note that regardless of the system's function, as the bike/trail facilities are planned, designed and constructed, the City should review the connectivity of the trails systems. With input from the community, a review of the connectivity of the trails should play an integral role in the decision making process for potential projects. In order to enhance the quality of life for those in the community, the trails should be accessible to all users and incorporate ADA requirements.

The trails, when constructed, may have slight variances in application type due to possible differences in the terrain at a specific trail location or differing user needs. However, regardless of the design type, the applicable design standards found in the latest version of the AASHTO Guide for the Development of Bicycle Facilities should be followed, as well as the Manual on Uniform Traffic Control Devices (MUTCD) guidelines for appropriate signage of the trails system.

4.2.2 Pedestrians

Every effort should be made to accommodate pedestrians throughout Tremonton City. An opportunity to include accessible sidewalks, while adhering to ADA requirements, during construction of other projects is encouraged. For the safety and convenience of pedestrian traffic, sidewalk placement should be free from debris and obstructions or impediments such as utility poles, trees, bushes, etc. The City should conduct a sidewalk inventory to document locations where there may be gaps or safety concerns in the sidewalk system. Effort should then be made to construct and complete the sidewalks where gaps or problems occur. The City will continue to require developers to include sidewalk placement or improvements in their respective project plans. The interconnectedness of the City's sidewalk system should be considered as development takes place.

Sidewalks in residential areas should be at least 5-feet wide whenever adequate right-of-way can be secured. This will provide sufficient room and a level of comfort to persons walking in pairs or passing and will specifically allow for persons with strollers or in wheelchairs to pass. On major roadways, sidewalks at least 6-feet wide and with a 6 to 10-foot park strip are desirable. In pedestrian-focused areas, such as schools, parks, sports venues or theaters, and in hotel and market districts, even wider sidewalks are recommended to accommodate and encourage a higher level of pedestrian activity, especially where tourist use would be expected. To ensure consistency of sidewalks throughout the area, UDOT's approved standard for sidewalks should be followed.

There may be opportunity for the City to make improvements to their sidewalk system through the Utah Department of Transportation's Safe Sidewalk Program, available through the Traffic and Safety Division. The City should contact UDOT's Region One office for application requirements.

The City should be aware of, and coordinate with, the area schools that are tasked with developing a routing plan to provide a safe route to school. The routing plan is to be reviewed and updated annually. Information regarding the Safe Routes to School program is available by contacting the Utah Department of Transportation's Traffic and Safety Division.

4.3 Enhancements Program

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) created the Transportation Enhancement program. The program has since been reauthorized in subsequent bills (i.e. TEA-21). The Transportation Enhancement program provides opportunities to use federal dollars to enhance the cultural and environmental value of the transportation system. These transportation enhancements are defined as follows by TEA-21:

> The term 'transportation enhancement activities' means, with respect to any project or the area to be served by the project, any of the following activities if such activity relates to surface transportation: provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists, acquisition of scenic easements and scenic or historic sites, scenic of historic highway programs (including the provision of tourist and welcome center facilities), landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals), preservation of abandoned railway corridors (including the conservation and use thereof for pedestrian or bicycle trails), control and removal of outdoor advertising, archeological planning and research, environmental mitigation to address water pollution due to highway runoff or reduce vehicle caused wildlife mortality while maintaining habitat connectivity, and establishment of transportation museums.

The Utah Transportation Commission, with the help of an advisory committee, decides which projects will be programmed and placed on the Statewide Transportation Improvement Program (STIP). Applications are accepted in an annual cycle for the limited funds available to UDOT for such projects. Information and Applications for the current cycle can be found on UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select "Planning and Programming", here you will find a sub-topic entitled "Transportation Enhancement Program". Applications must be received by the UDOT Program Development Office, on or before the specified date to be considered. Projects will compete on a statewide basis.

4.4 Transportation Corridor Preservation

Transportation Corridor Preservation will be introduced as a method of helping Tremonton's Transportation Master Plan. This section will define what Corridor Preservation is and ways to use it to help the Transportation Master Plan succeed for the City.

4.4.1 Definition

Transportation Corridor Preservation is the reserving of land for use in building roadways that will function now and can be expanded at a later date. It is a planning tool that will reduce future hardships on the public and the city. The land along the corridor is protected for building the roadway and maintaining the right-of-way for future expansion by a variety of methods, some of which will be discussed here.

4.4.2 Corridor Preservation Techniques

There are three main ways that a transportation corridor can be preserved. The three ways are acquisition, police powers, and voluntary agreements and government inducements. Under each of these are many sub-categories. The main methods will be discussed here, with a listing of some of the sub-categories.

4.4.2.1 Acquisition

One way to preserve a transportation corridor is to acquire the property outright. The property acquired can be developed or undeveloped. When the city is able to acquire undeveloped property, the city has the ability to build without greatly impacting the public. On the other hand, acquiring developed land can be very expensive and can create a negative image for the City. Acquisition of land should be the last resort in any of the cases for Transportation Corridor Preservation. The following is a list of some ways that land can be acquired.

- Development Easements
- Public Land Exchanges
- Private Land Trusts
- Advance Purchase and Eminent Domain
- Hardship Acquisition
- Purchase Options

4.4.2.2 Exercise of Police Powers

Police powers are those ordinances that are enacted by a municipality in order to control some of the aspects of the community. There are ordinances that can be helpful in preserving corridors for the Transportation Master Plan. Many of the ordinances that can be used for corridor preservation are for future developments in the community. These can be controversial, but can be initially less intrusive.

- Impact Fees and Exactions
- Setback Ordinances
- Official Maps or Maps of Reservation
- Adequate Public Facilities and Concurrency Requirements

4.4.2.3 Voluntary Agreements and Governmental Inducements

Voluntary agreements and governmental inducements rely on the good will of both the developers and the municipality. Many times it is a give and take situation where both parties could benefit in the end. The developer will likely have a better-developed area and the municipality will be able to preserve the corridor for transportation in and around the development. Listed below are some of the voluntary agreements and governmental inducements that can be used in order to preserve transportation corridors in the city limits.

- Voluntary Platting
- Transfer of Development Rights
- Tax Abatement
- Agricultural Zoning

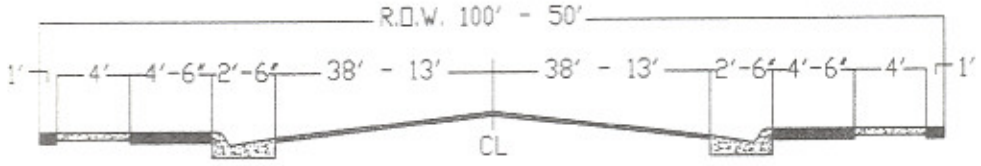
Each of these methods has its place, but there is an order that any government should try to use. Voluntary agreements and government inducements should be used, if possible, before any police powers are used. Police powers should be tried before acquisition is sought. UDOT has developed a toolkit to aid in corridor preservation techniques. This toolkit contains references to Utah code and examples of how the techniques have been used in the past.

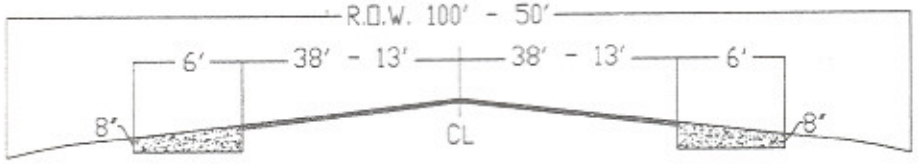
"RIGHT-OF-WAY WIDTHS"

MAJOR ARTERIAL: 100 FEET
MINOR ARTERIAL: 80 FEET
COLLECTOR STREET: 66 FEET
STANDARD RESIDENTIAL: 60 FEET
MINOR STREET: 50 FEET
PRIVATE STREET: 26 FEET

"ROADWAY WIDTHS"

MAJOR ARTERIAL: 76 FEET
MINOR ARTERIAL: 56 FEET
COLLECTOR STREET: 42 FEET
STANDARD RESIDENTIAL: 36 FEET
MINOR STREET: 26 FEET
PRIVATE STREET: AS REQUIRED BY PLANNING COMMISSION





TYPICAL ROAD CROSS SECTIONS

DIAGRAM 2.07.021

5.0 Transportation Improvement Projects

5.1 Current Statewide Transportation Improvement Program (2004-2008 STIP)

At the present time there are several projects under consideration and investigation in the Tremonton City area. Currently in the STIP are the following Projects:

- SR-102; Over Corinne Canal at the Crossroads
- Bridge; 5200 West 8000 North over Corinne Canal in Elwood

Also, these projects are currently listed on the State of Utah's Long Range Plan, Utah Transportation 2030:

- Reconstruction of Bridge from SR-102 to I-15
- Reconstruction/ Bridge from I-15 near SR-13 to near I-84
- Reconstruction of SR-82 from SR-102 in Tremonton to near Garland
- Reconstruct SR-102 from SR-83 near Lampo Jct. To near I-84

5.2 Recommended Projects

Tremonton is in the process of starting a study and design of a new road at approximately 2000 West between Main Street and 1000 North. This road will be a vital access for new development for industrial access and a new museum for the area. This will also serve as a more convenient truck route to I-15 and I-84 for the current industrial park and the any future industrial park area.

The following list identifies the six other projects that have been identified as having the highest priority to the Tremonton City Transportation Advisory Committee. These needs were identified through a series of meetings where the TAC identified the needs and set priorities for projects.

- Traffic Signal/Warrant Study for an intersection at Main Street (SR-102) & 1000 West.
- Interchange improvements to improve site distance at I-84 & SR-102.
- Add truck lanes or passing lanes along SR-30, from SR-38 to SR-23 in Cache County.
- Bicycle and Walking Trails along Iowa String Road from 1000 North to Rocket Road.
- A Transit Study to tie-in Tremonton to Commuter Rail.
- Traffic Signal/Warrant Study for an intersection at 1000 North & 300 East (SR-82)

Additional concerns and issues that were identified are identified in table 5-1.

Transportation Needs and Cost Estimates

County	Route	Project Description / Concept State Highway Projects (LRP)	Start Point	End Point	Length or Quantity	Improvement	Estimated Project Unit Cost	Estimated Cost
Box Elder/Cache	30	Passing Lanes on SR-30 (from SR- 38 to SR-23)			8 miles	Safety/Passing Lanes	$1,000,000	$8,000,000
Box Elder	15 & 13	Interchange Improvements to improve site distance (I-15 & SR-13)			1 ea.	Interchange	$5,000,000	$5,000,000
Box Elder	15	Noise Wall South Side of Tremonton	500 West		0.75 miles	Noise Wall	$600,000	$450,000
Box Elder	82	Widen 300 East & Main Street (SR-82)	400 North	600 North	0.25 miles	Widening	$4,500,000	$1,125,000
Box Elder	84 & 102	Interchange Improvements to improve site distance (I-84 & SR-102)			1 ea.	Interchange	$5,000,000	$5,000,000
	15	Interchange I-15 & Main Street (SR-102)			1 ea.	Interchange	$35,000,000	$35,000,000
		State Highway Projects (Operational)						
Box Elder	102	Right Turn Lane at 570 East& Main St.(SR-102)			1 ea.	Intersection	$200,000	$200,000
Box Elder	102	Improvements to Signage near I-84 & SR-102, Frontage road (Safety Study)			1 ea,	Safety Spot Improvement	$50,000	$50,000
Box Elder	15 & 84	Interchange Lighting Repair			3 ea.	Lighting	$75,000	$225,000
Box Elder	102	Main Street Parking (Study for Parking Master Plan)			1 ea.	Study	$50,000	$50,000
Box Elder	102	Intersection Safety Study Main St. (SR-102)/ 1000 West			1 ea.	Safety Study	$50,000	$50,000
Box Elder	13 & 102	Speed Limit Sign Near Intersection Main St.(SR-102)/SR-13 (Letter to Region)			1 ea.	Maintenance	$500	$500
Box Elder	102	Traffic Access Management Study for Area @ Main Street (SR-102) / 2300 West			1 ea.	Safety Study	$50,000	$50,000
		Local Highway Projects						
		New Road 2000 West,	Main St.	1000 North	1 mile	New Road	$1,250,000	$1,250,000
		Widen 2 Bridges on Rocket Rd. @ 250 East & Corinne Cannel			2 ea.	Bridge	$500,000	$1,000,000
		New Road , 600 North (across Malad River)	SR-82	SR-13	1 mile	New Road	$1,250,000	$1,250,000
		New Road, 600 South (across Malad River)	Tremont St.	SR-13	1 mile	New Road	$1,250,000	$1,250,000
		New Road, 1650 West	Main St.	1000 North	1 mile	New Road	$1,250,000	$1,250,000
		Traffic Routing Study for Interstate Connectivity			1 ea.	Study	$50,000	$50,000
		Widen Bridge/Cannel @ 425 West, Main Street			1 ea.	Bridge	$500,000	$500,000
		Culvert @ 1000 North & 1000 West for Irrigation to School Recreation Facility			1 ea.	Culvert	$125,000	$125,000
		Traffic Calming/ Striping Study on 600 North near Schools	1000 West	300 East	1 mile	Safety	$50,000	$50,000
		Rail Road Crossing Repair and Up-Grade Citywide			7 ea.	Safety	$100,000	$700,000
		Pedestrian/ Bicycle Projects						
		New Sidewalk along North Side of 600 North	200 West	1000 West	0.75 mile	Safety	$225,000	$168,750
		Load/Unload Study for McKinley School			1 ea.	Safety	$25,000	$25,000
		Trails Improvement along Iowa String Road	1000 North	Rocket Road	2 mile	Enhancement	$100,000	$200,000
		Transit Study to Tie-In Commuter Rail			1 ea.	Transit	$50,000	$50,000
		Senior Citizen Transit Study			1 ea.	Transit	$50,000	$50,000
		Traffic Signals (ITS)						
Box Elder	102	Future Traffic Signal/Warrant Study Main St. (SR-102)/ 1000 West			1 ea.	Traffic Signal	$200,000	$200,000
Box Elder	13 & 102	Future Traffic Signal/Warrant Study Main St. (SR-102)/ 1600 East (SR-13)			1 ea.	Traffic Signal	$200,000	$200,000
Box Elder	102	Future Traffic Signal/Warrant Study Main St. (SR-102)/ 100 East			1 ea.	Traffic Signal	$200,000	$200,000
Box Elder	102	Future Traffic Signal/Warrant Study Main St. (SR-102)/ 2300 West			1 ea.	Traffic Signal	$200,000	$200,000
Box Elder	102	Future Traffic Signal/Warrant Study Main St. (SR-102)/ 2000 West			1 ea.	Traffic Signal	$200,000	$200,000
Box Elder	82	Future Traffic Signal/Warrant Study 1000 North & 300 East (SR-82)			1 ea.	Traffic Signal	$200,000	$200,000
		Freight						
		Rail Spur North Leg of Switch to Industrial Park Spur			1 ea.	Rail Road	$750,000	$750,000
						Estimated Total Needs Costs		$65,069,250

5.3 Revenue Summary

5.3.1 Federal and State Participation

Federal and State participation is important for the success of implementing these projects. UDOT needs to see the Transportation Master Plan so that they understand what the City wants to do with its transportation system. UDOT can then weigh the priorities of the city against the rest of the state. It is important for Tremonton City to promote projects that can be placed on UDOT's five-year Statewide Transportation Improvement Program (STIP) as soon as possible. The process for placing projects into the STIP and funding of these projects can be found at UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select the tab for " Planning and Programming" here there is a subtopic entitled "Statewide Transportation Improvement Program (STIP)" that describes this program in detail. Additionally coordination with UDOT's Region Director and Planning Engineer will be practical.

5.3.2 City Participation

The City will fund the local Tremonton City projects. The local match component and partnering opportunities vary by the funding source.

5.4 Other Potential Funding

Previous sections of this chapter show significant shortfalls projected for the short-range and long-range programs. The following options may be available to help offset all or part of the anticipated shortfalls:

- Increased transportation impact fees.
- Increased general fund allocation to transportation projects.
- General obligation bonds repaid with property tax levies.
- Increased participation by developers, including cooperative programs and incentives.
- Special improvement districts (SIDs), whereby adjacent property owners are assessed portions of the project cost.
- Sales or other tax increase.
- State funding for improvements on the county roadway system.
- Increased gas tax, which would have to be approved by the State Legislature.
- Federal-aid available under one of the programs provided in the federal transportation bill (TEA-21 is the current bill; SAFETEA will likely be passed in late 2004, or early 2005).

Increased general fund allocation means that General Funds must be diverted from other governmental services and/or programs. General obligation bonds provide initial capital for transportation improvement projects but add to the debt service of the governmental agency. One way to avoid increased taxes needed to retire the debt is to sell bonds repaid with a portion of the municipalities' State Class monies for a certain number of years.

Participation by private developers provides a promising funding mechanism for new projects. Developers can contribute to transportation projects by constructing on-site improvements along their site frontage and by paying development fees. Municipalities commonly require developers to dedicate right-of-way and widen streets along the site frontage. A negative side of the on-site improvements is that the streets are improved in

pieces. If there are not several developers adjacent to one another at the same time, a continuous improved road is not provided. One way to overcome this problem is for the jurisdiction to construct the street and charge the developers their share when they develop their property.

Another way developers can participate is through development fees. The fees would be based on the additional improvements required to accommodate the new development and would be proportioned among each development. The expenditure of additional funds provided by the fees would be subject to the City's spending limit. However, development fees are often a controversial issue and may or may not be an appropriate method of funding projects.